Unacademy Atoms

200 MOST IMP ORGANIC QUESTIONS

PART 2

JEE 2023

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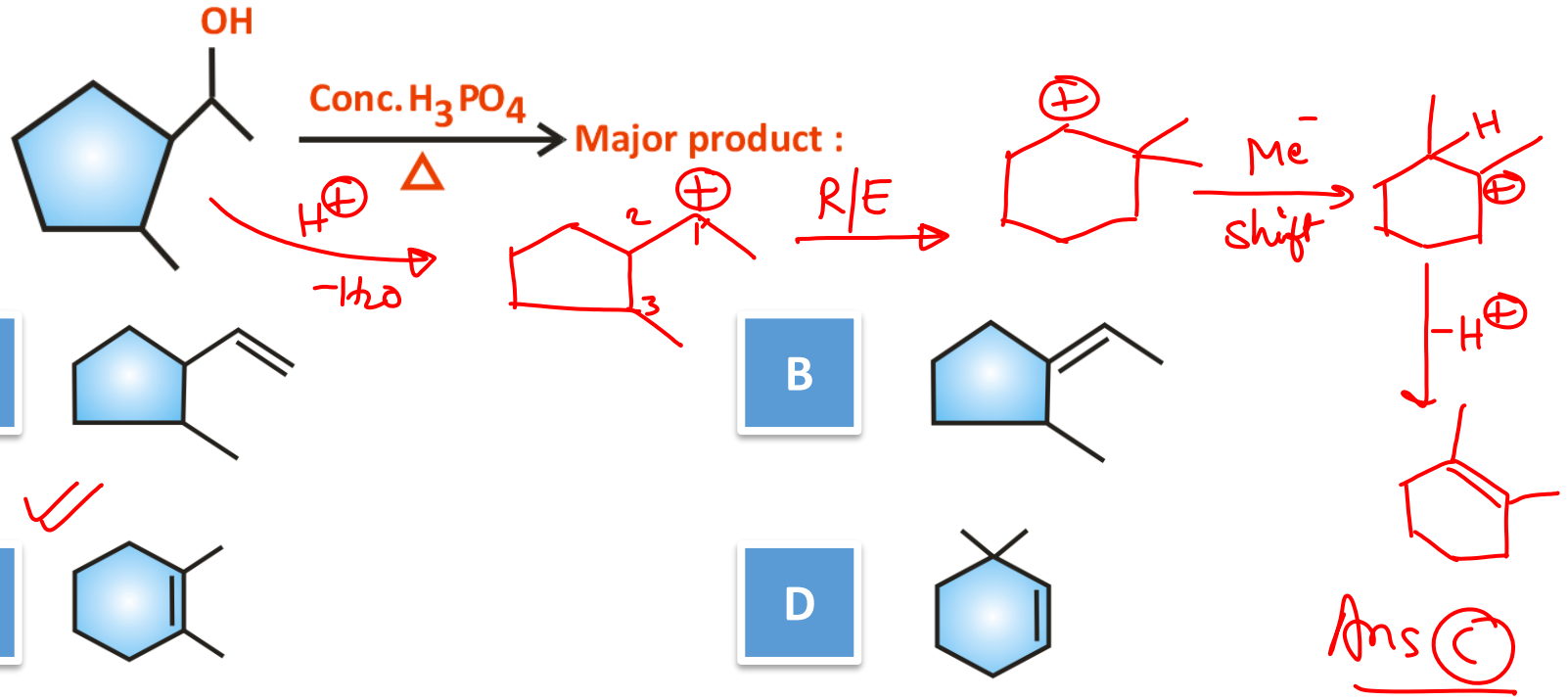

OH
Conc. H_3PO_4
Δ
Major product :
$H^{\oplus}$
$-H_2O$
2
1
3
R/E
Me^-
Shift
H
$-H^{\oplus}$
A
B
C
D
Ans (C)

Ans. : C

Lindlar's Catalyst

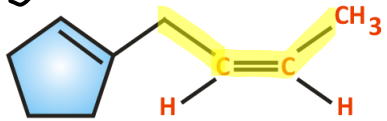
>C=C< → N R

—C≡C— → >C=C<

syn hydrogenation

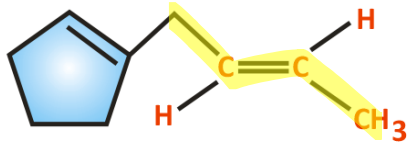
Ans (A)

A



B

C



D None of these

Ans. : A

$$H_3C - CH = CH_2 + HCl \xrightarrow{Peroxide} Product,$$

the intermediate of reaction is:

A $CH_3 - \dot{C}H - CH_3$

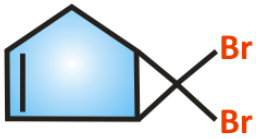
B $CH_3 - CH_2 - \dot{C}H_2$

C $CH_3 - \overset{\oplus}{C}H - CH_3$

D $\overset{\oplus}{C}H_2 - CH_2 - CH_3$

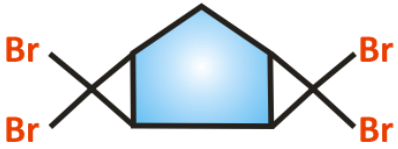
Ans. : C

A

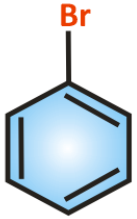


B

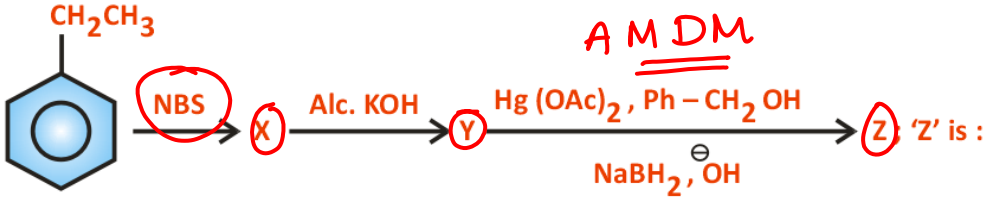
C



D

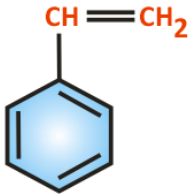


Ans. : D

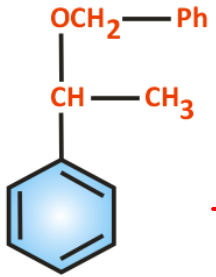


AMDM

A

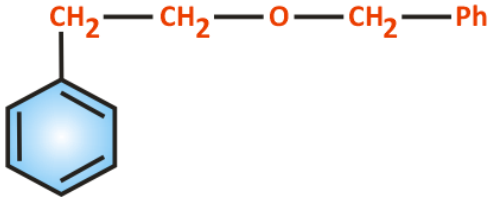


B

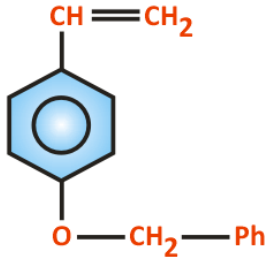


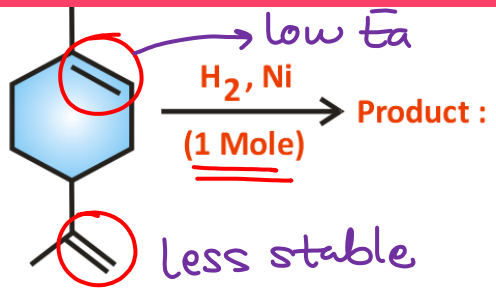
Ans — B

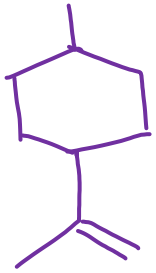
C



D

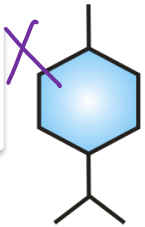




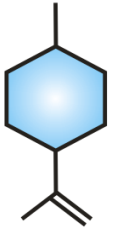


More substituted gets prefe (Chemisorption)

A

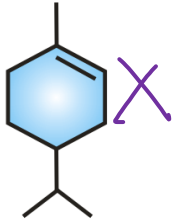


B



Best Ans

C



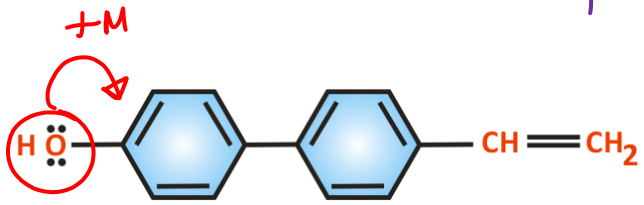
D

No reaction

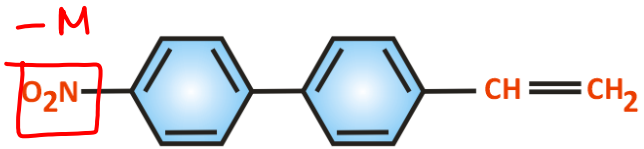
Fastest rate of electrophilic addition takes place in :

$E^{\oplus}$ / $H^{\oplus}$ → fast attack

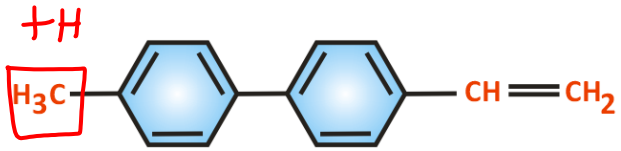
A



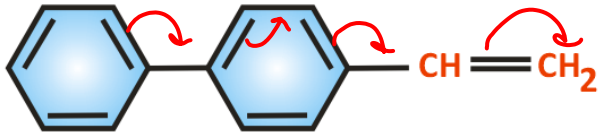
B



C



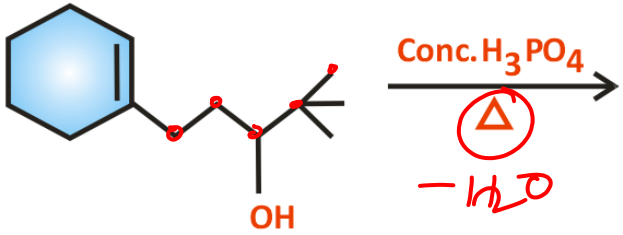
D



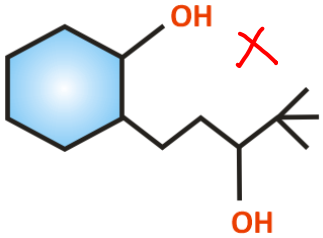
Ans → (A)

Ans. : A

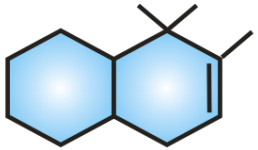
Which of the following will be the correct product of reaction?



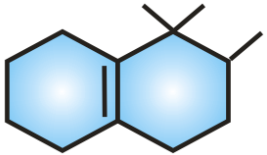
A



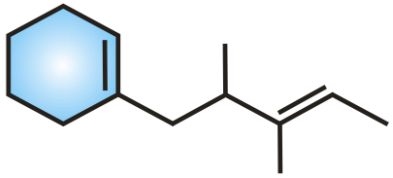
B



C

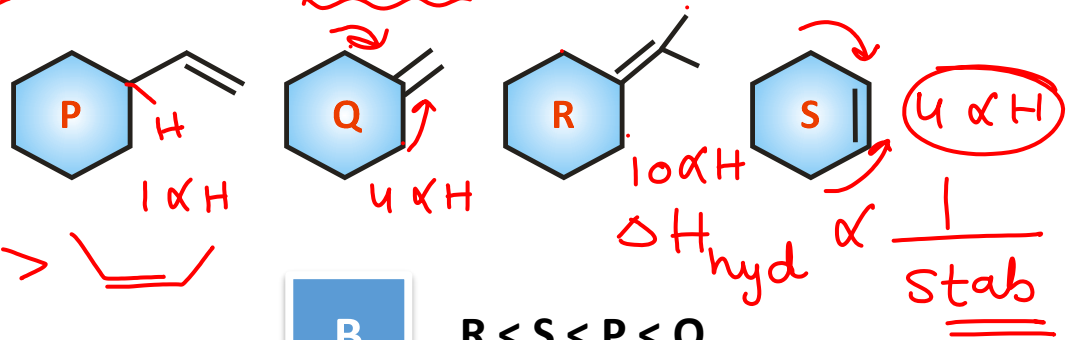


D



Ans. : C

Arrange the following alkenes in increasing order of their enthalpy of hydrogenation (– ΔH):



A R < S < Q < P

B R < S < P < Q

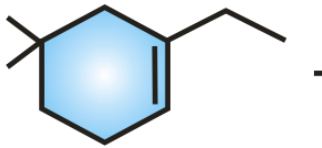
C P < Q < R < S

D P < Q < S < R

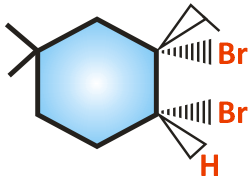
P > S > Q > R

Ans. : A

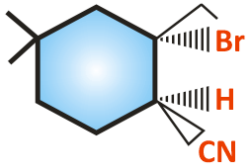
Give the major product of the following reaction



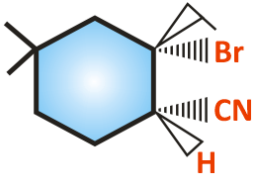
A



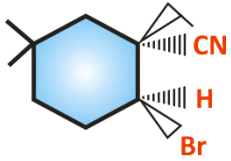
B



C

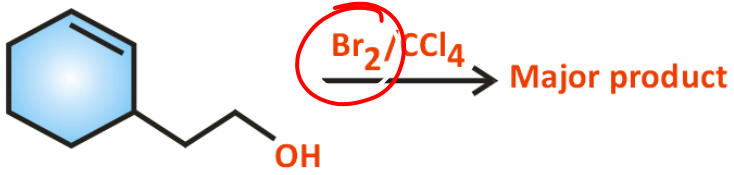


D

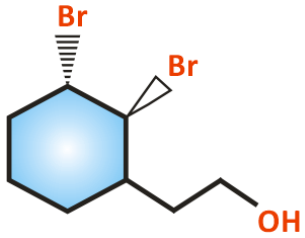


Ans. : D

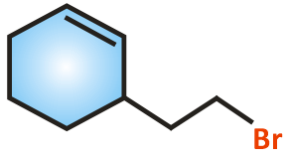
Give the major product of following reaction



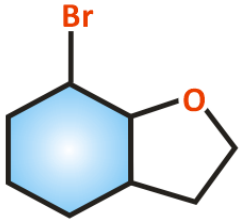
A



B

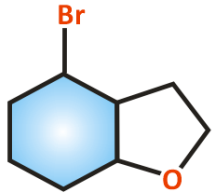


C



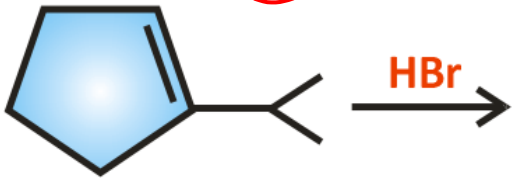
Ans C

D

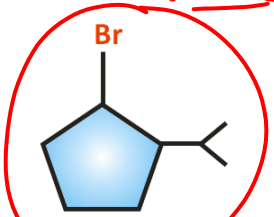


Ans. : C

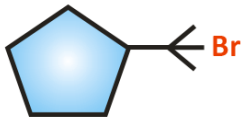
Which of the following products is not formed in following reaction?

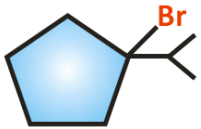


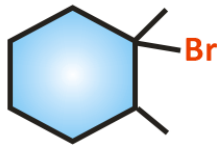
Ans (A)

A 

Ans (A)

B 

C 

D 

Ans. : A

$Hg(OAc)_2, H_2O$

$NaBD_4, \overset{\ominus}{O}H$

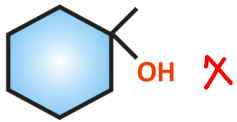
Major Product:

OMDM

MKA

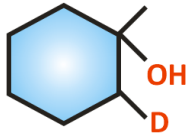
Ans B

A

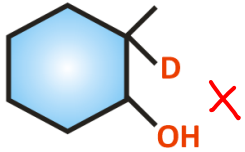


X

B

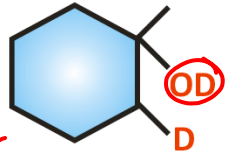


C



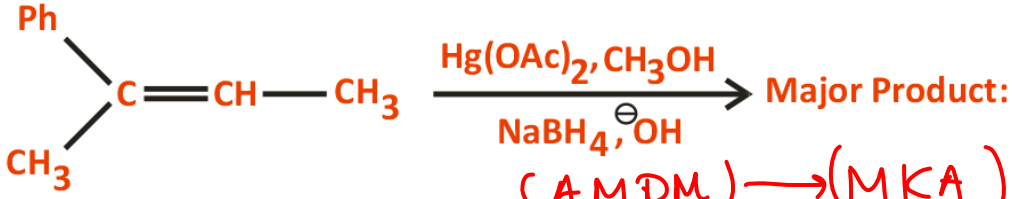
X

D

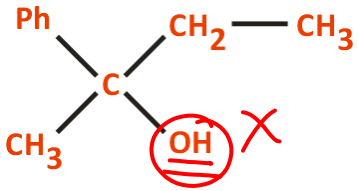


X

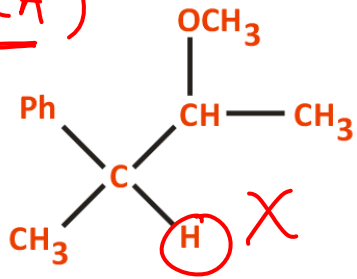
Ans : B



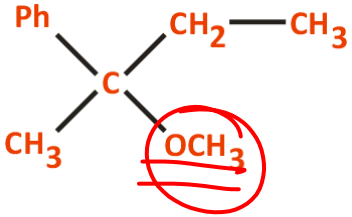
A



B



C

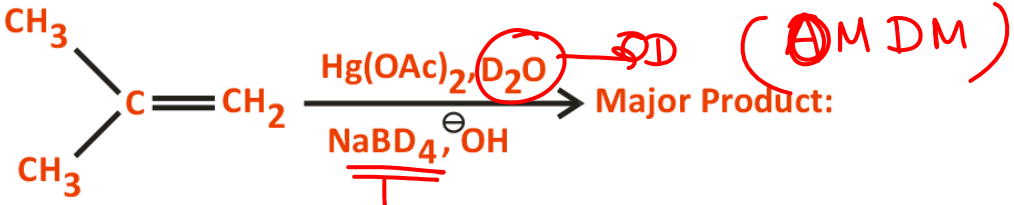


D

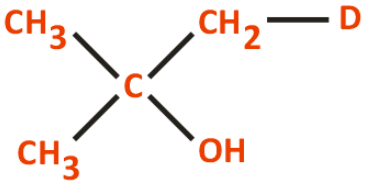
None of these

X

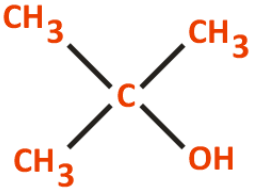
Ans. : C


CH3
C
CH2
CH3
Hg(OAc)2, D2O
NaBD4, ⊖OH
Major Product:
OD
AMDM
D

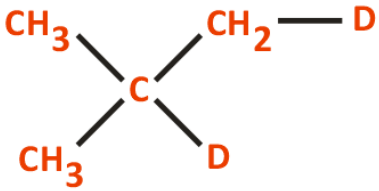
A


CH3
CH2
D
C
CH3
OH

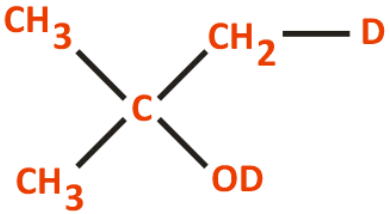
B


CH3
CH3
C
CH3
OH

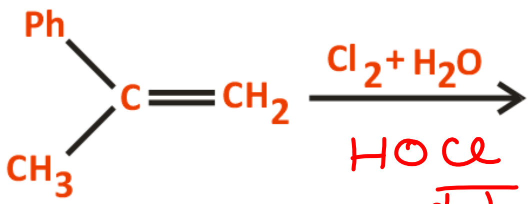
C


CH3
CH2
D
C
CH3
D

D

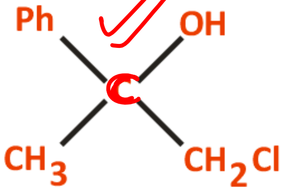

CH3
CH2
D
C
CH3
OD

Ans : D

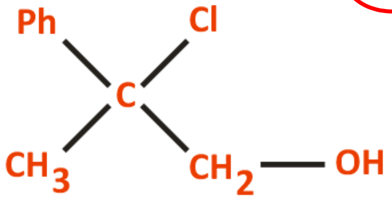


Major Product:

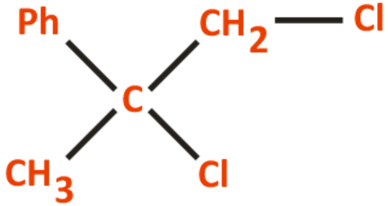
A



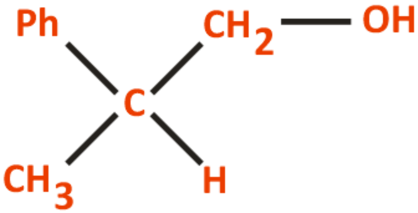
B



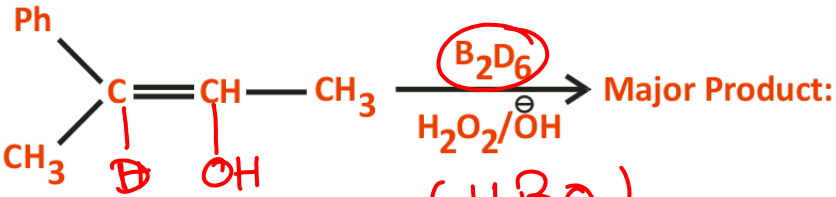
C



D



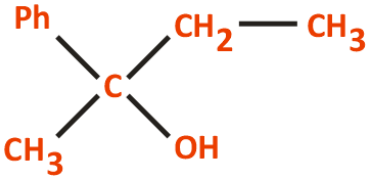
Ans. : A



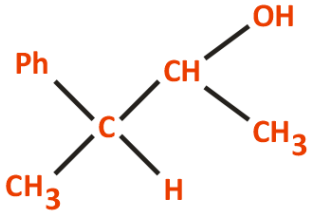
(HBO)

Any

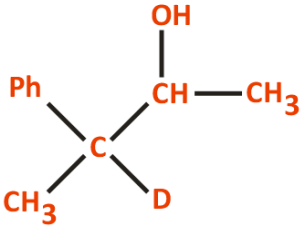
A



B

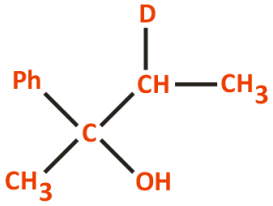


C



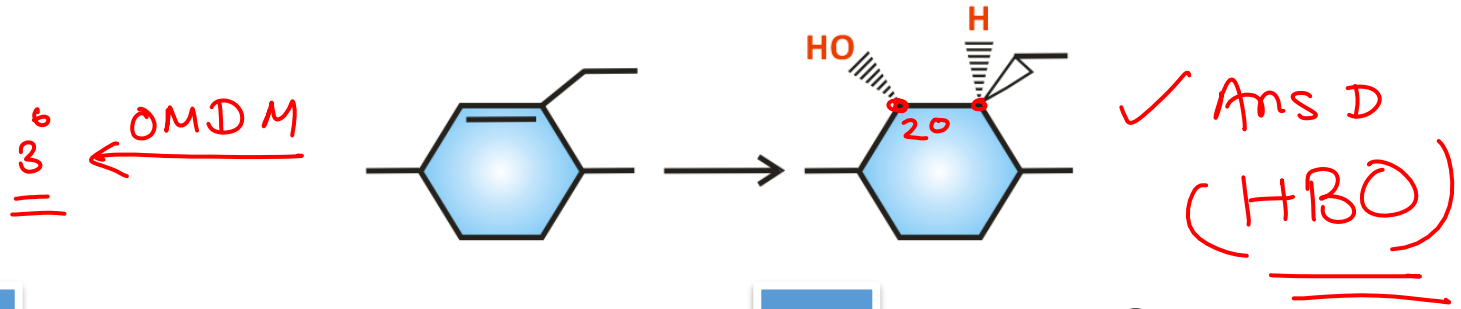
Ans (C)

D



Ans. : C

Which of the following reagents will bring about following transformations?



A Cl_2/H_2O

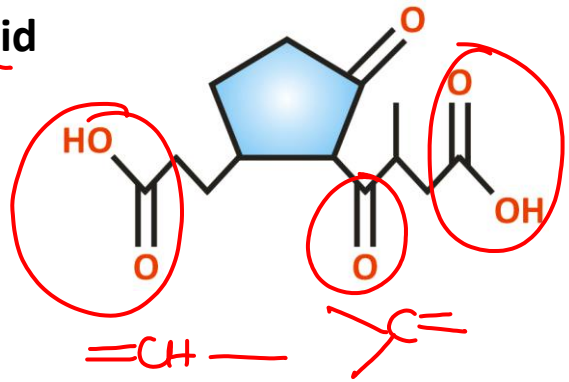
B $PBr_3/H^{\oplus}$

C $Hg(OAc)_2$, $H_2O/NaBH_4, \overset{\ominus}{O}H$

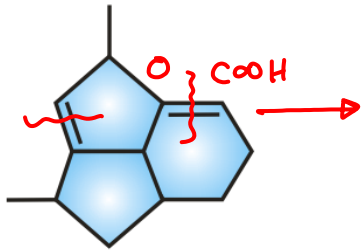
D $\overset{\ominus}{B}H_4$. THF, $H_2O_2/\overset{\ominus}{O}H$

Ans. : D

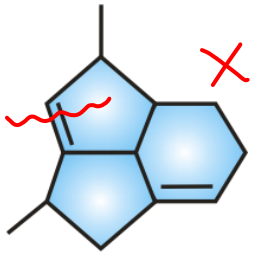
Which molecule will give following dicarboxylic acid upon treatment with acidic solution of $KMnO_4$?



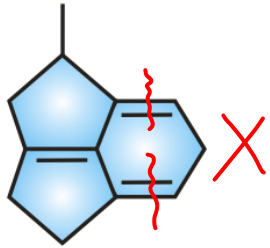
A



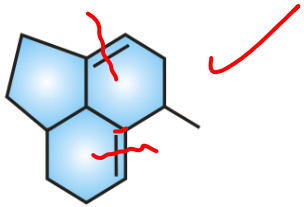
B



C

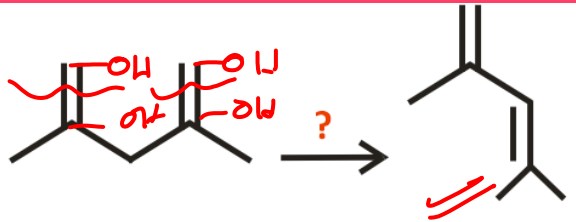


D



Ans. : D

Which of the following reagents would best accomplish the following transformations?



A Excess B_2H_6 ; $NaOH/H_2O_2$ followed by OsO_4

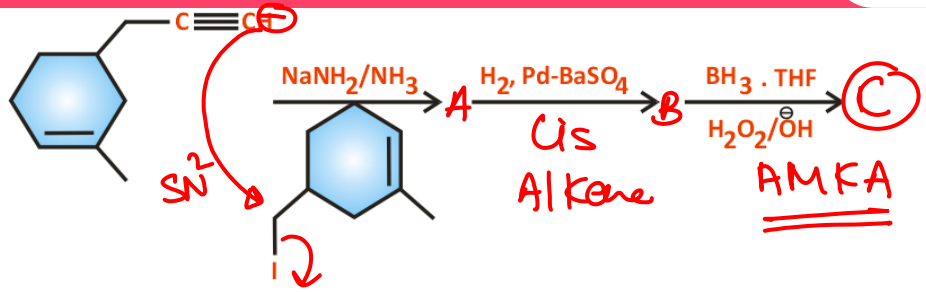
B Excess $Hg(OAc)_2 / H_2O; NaBh_4, OH$ followed by conc. H_2SO_4, Δ

C O_3,Zn/H_2O followed by $Hg(OAc)_2 / H_2O; NaBh_4, OH$

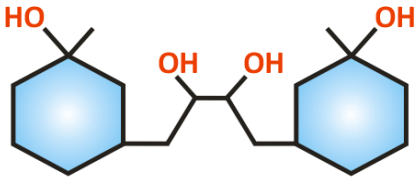
D OsO_4; $NaHSO_3$ followed by NaOH

Ans. : B

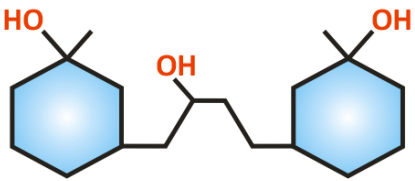
What is the product of the following sequence of reaction?



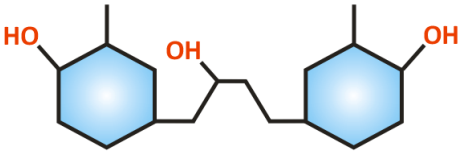
A



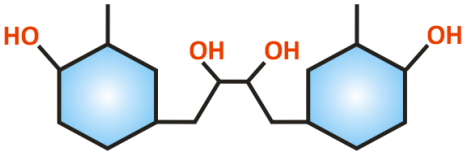
B



C



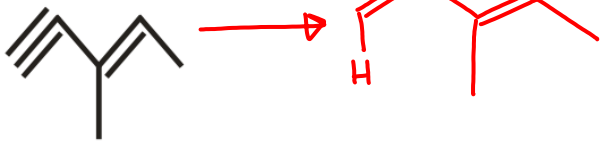
D



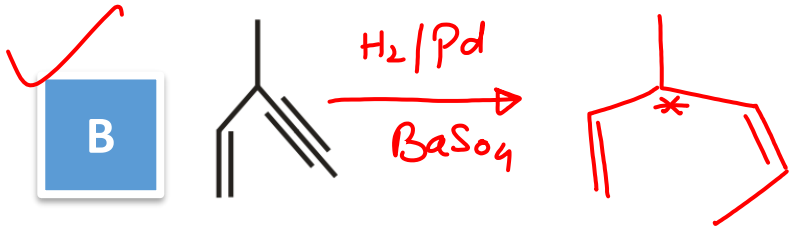
Ans. : C ✓ Ans C

Which would produce chiral molecule after treatment with Lindlar catalyst?

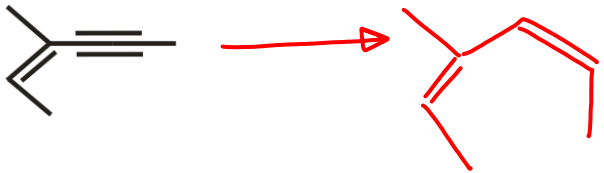
A



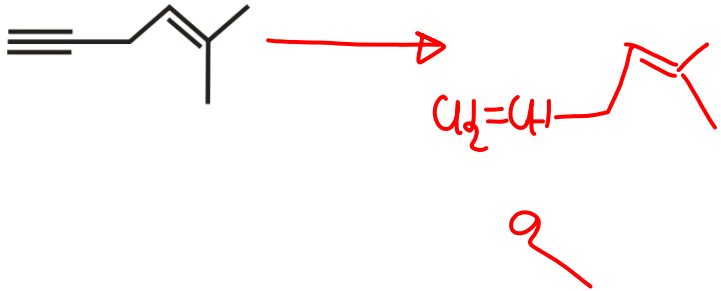
B



C

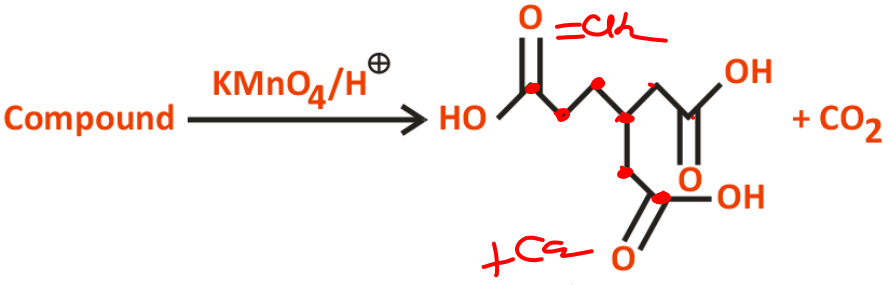


D

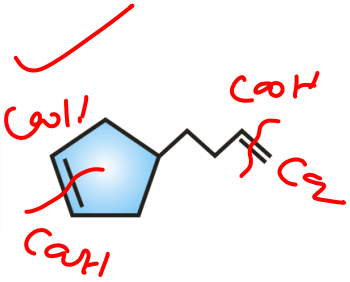


Ans. : B

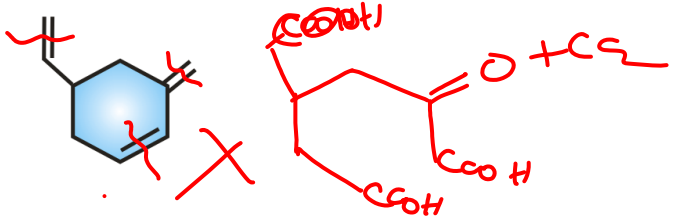
Which of the following compounds was starting material for the oxidation shown below?



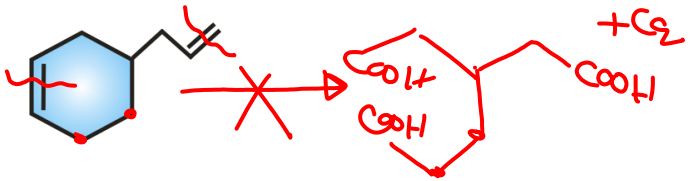
A



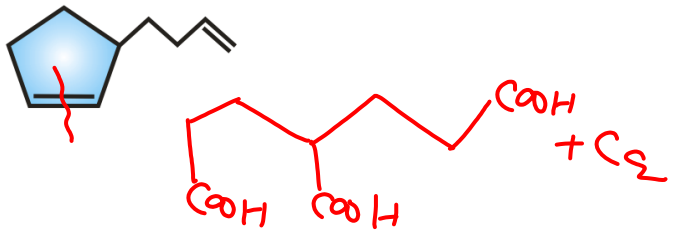
B



C

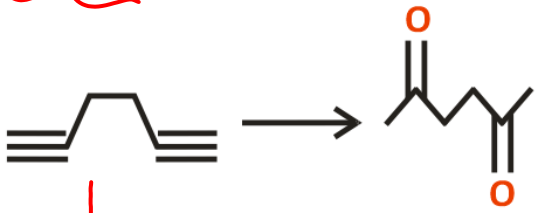


D



Ans. : A

How is the following transformation best carried out?



OMDM

OH

tauto

A OsO_4; $NaHSO_3$

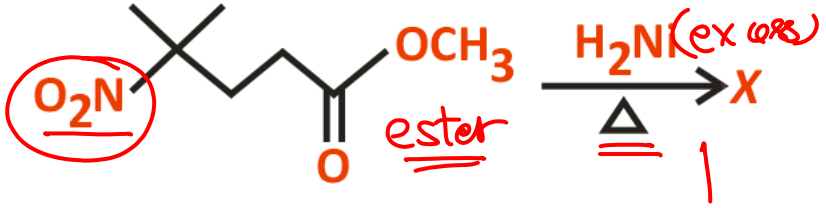
B H_2SO_4 / H_2O

C $HgSO_4$ / H_2SO_4

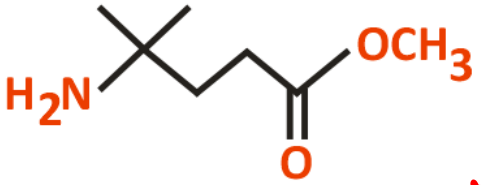
D HIO_4

Ans. : C

The major product (X) of the reaction is :



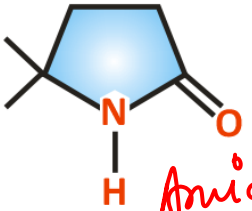
A



B

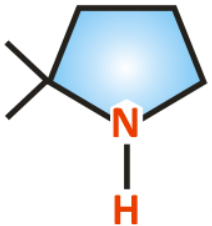
$-NO_2 > -COOR$

C

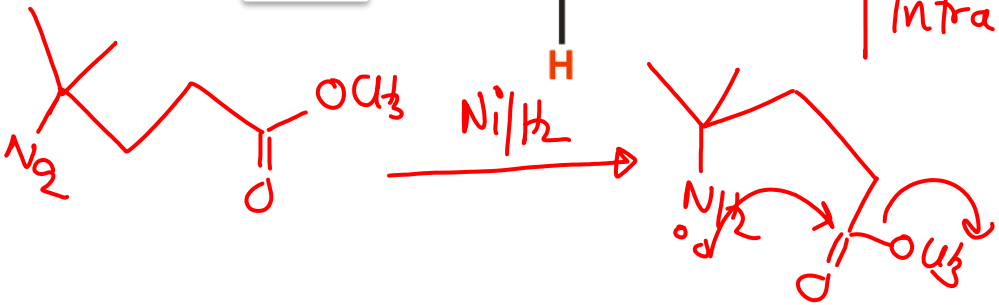


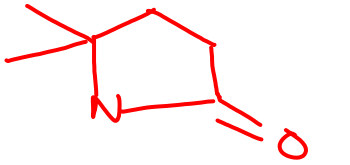
Amide (least reactive)

D



Ans. : C

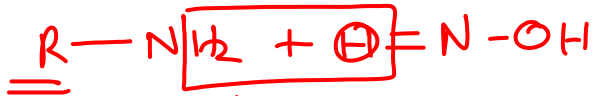


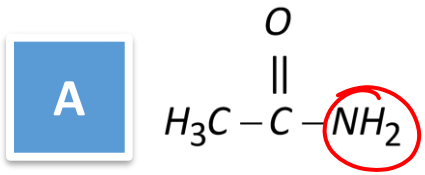


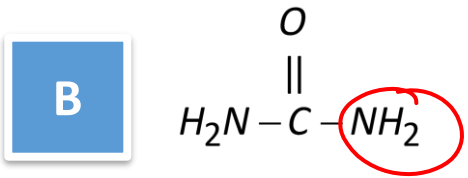
Ni/H_2

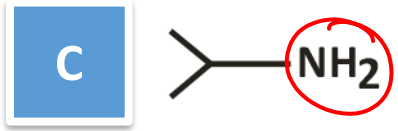
Intra S_N2

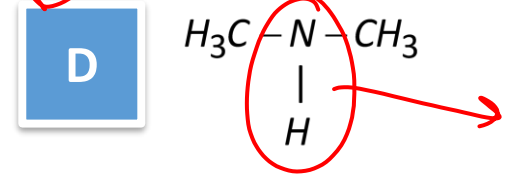
Which of the following compounds does not liberate N_2 on treatment with HNO_2?

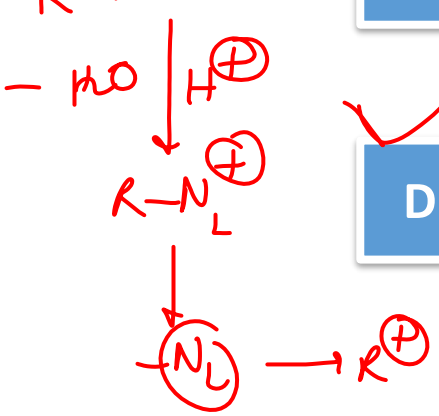


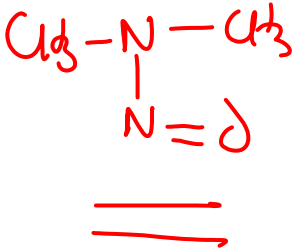






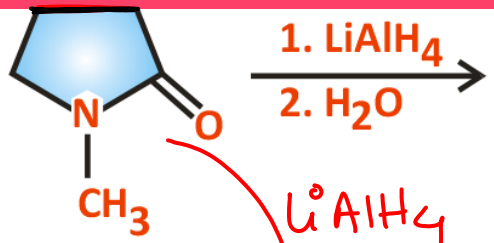




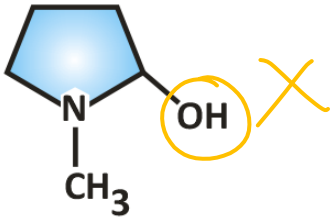


Ans. : D

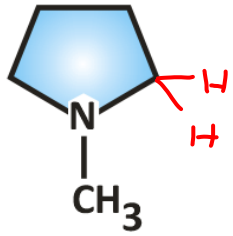
The product formed in the reaction is:



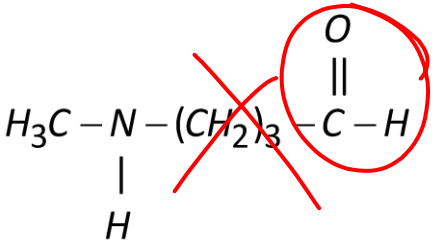
A



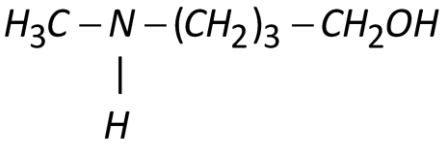
B



C

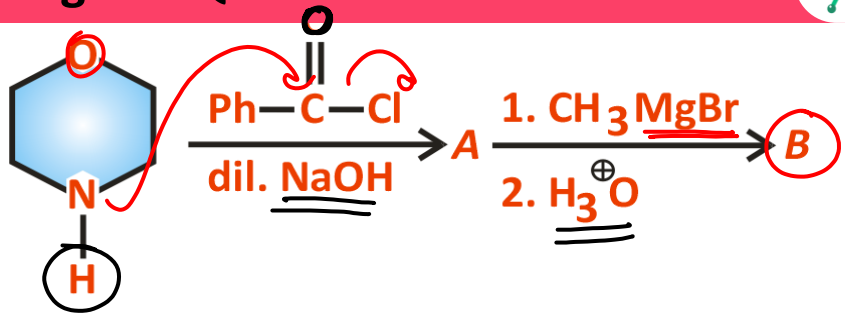


D

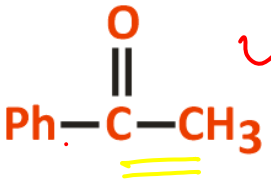


Ans. : B

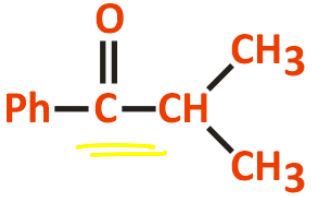
The major product (B) formed in the reaction sequence is:



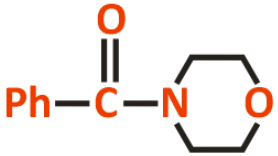
A



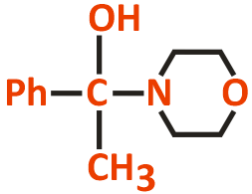
B



C

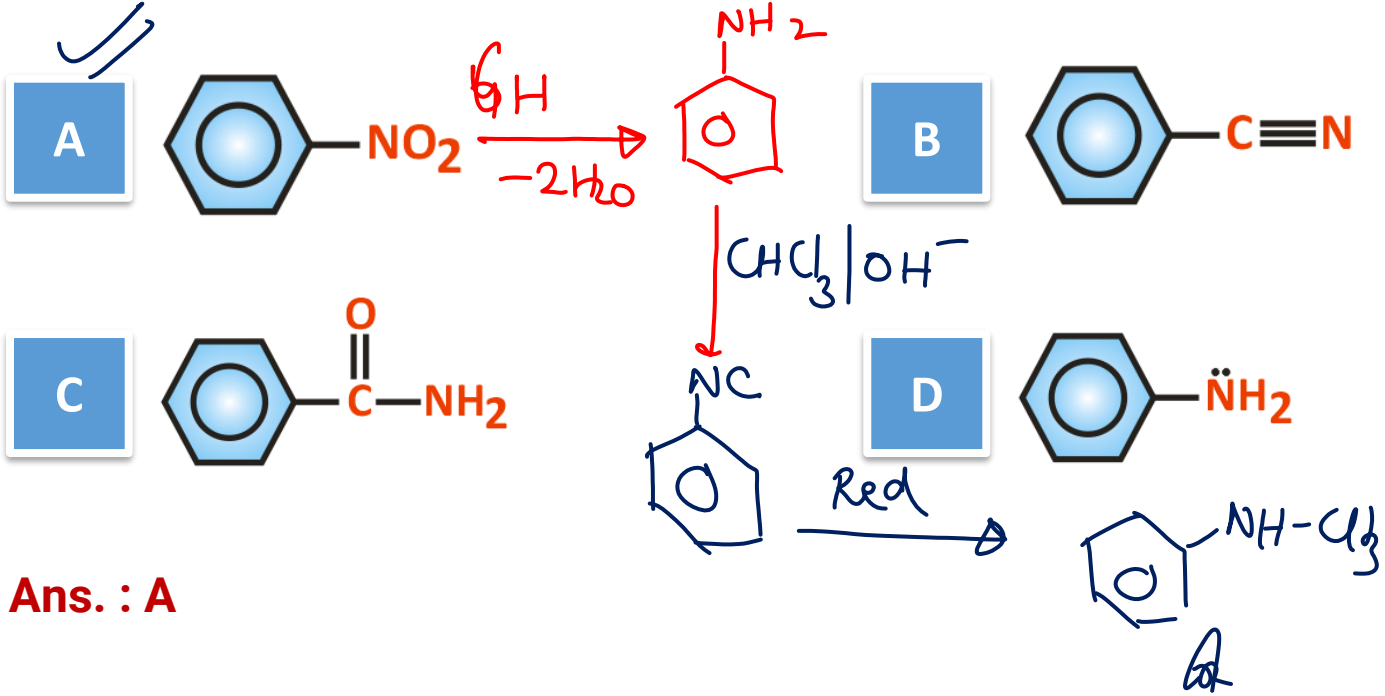


D



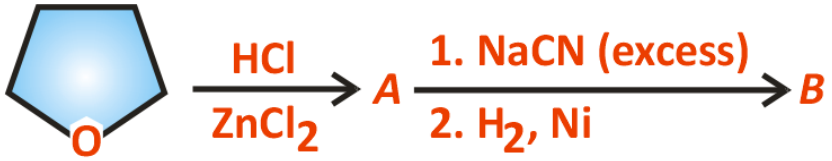
Ans. : A

An organic compound (A) on reduction gives a compound (B) which on reaction with $CHCl_3$ and NaOH form (C). The compound (C) on catalytic reduction gives N-methylaniline. The compound (A) is :



Ans. : A

The major end product (B) of the reaction:



A 

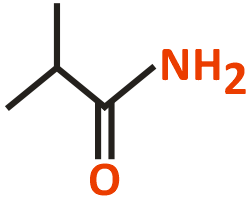
B 

C 

D 

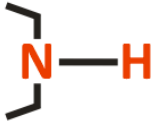
Ans. : C

Which one among the following is expected to form a secondary alcohol on treatment with HNO_2?

A 

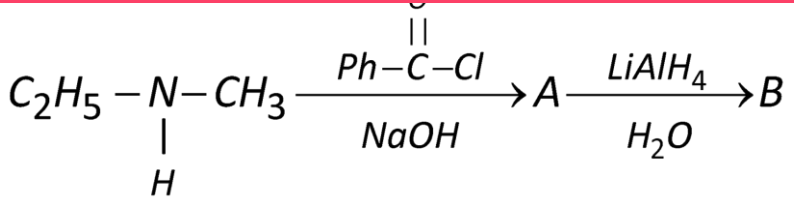
B 

C 

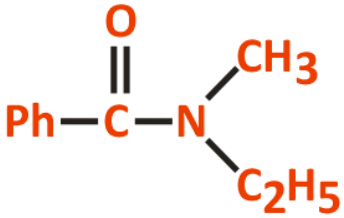
D 

Ans. : C

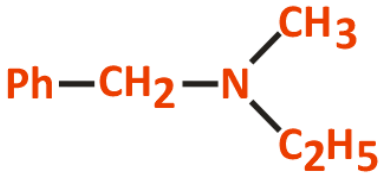
The end product (B) of the reaction sequence :



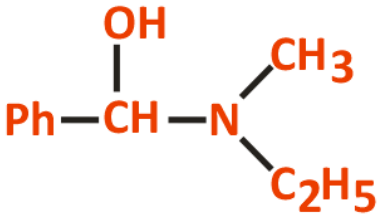
A



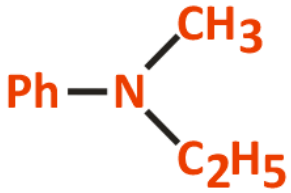
B



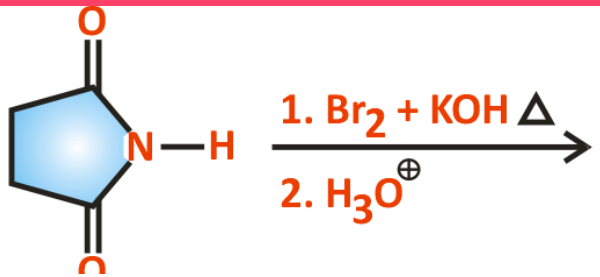
C



D

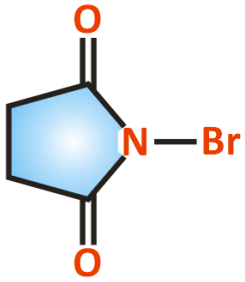


Ans. : B

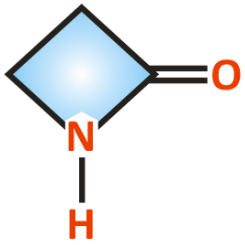


The product of above reaction is :

A

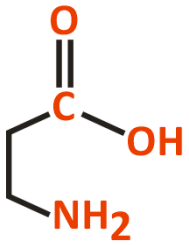


B



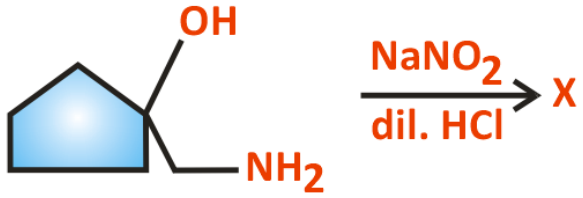
C

D

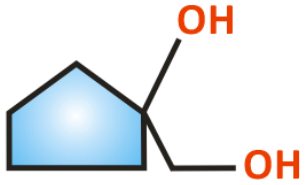


Ans. : D

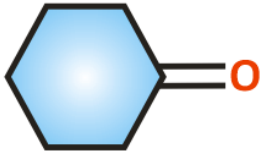
The major product (X) of the reaction is :



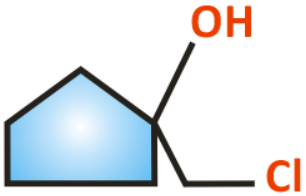
A



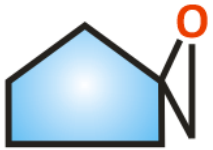
B



C

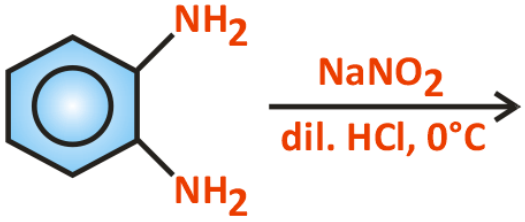


D

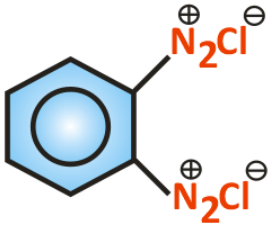


Ans. : B

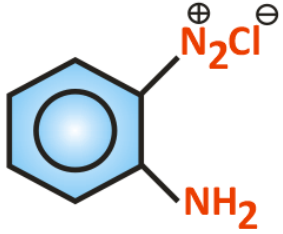
The major product of the reaction is :



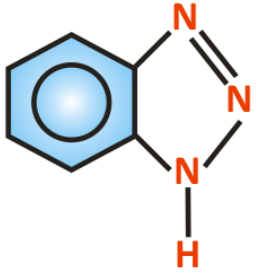
A



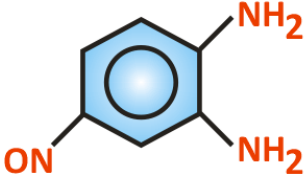
B



C

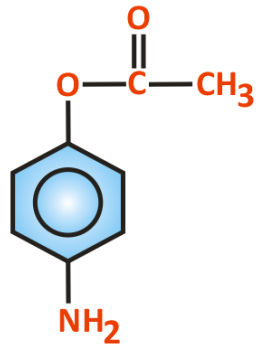


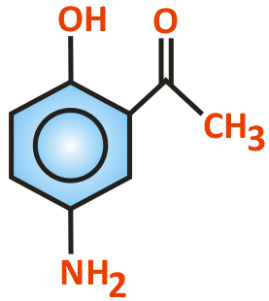
D

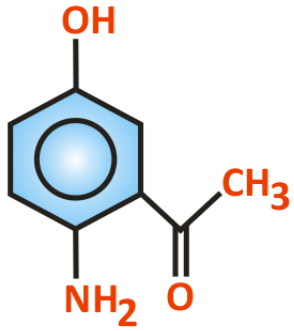


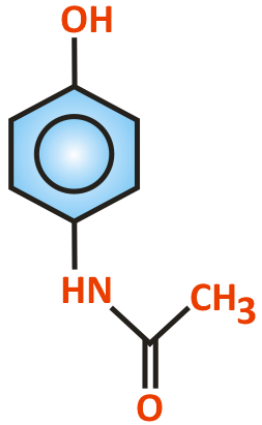
Ans. : C

The reaction of p-aminophenol with one mole of acetyl chloride in presence of pyridine gives:

A 

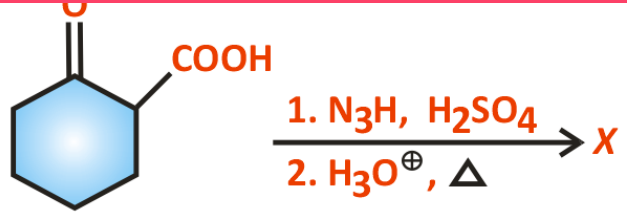
B 

C 

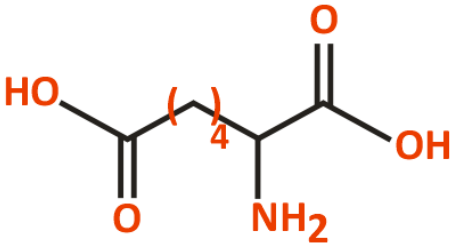
D 

Ans. : D

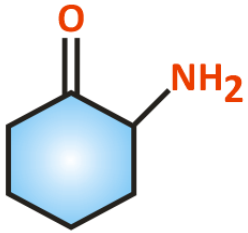
The major product (X) formed in the reaction :



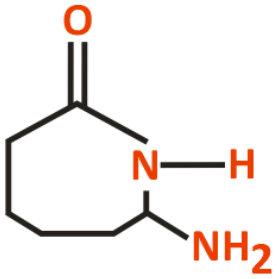
A



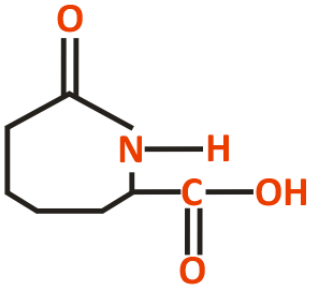
B



C

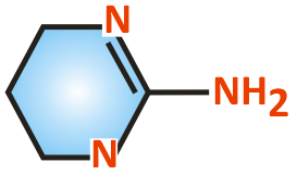


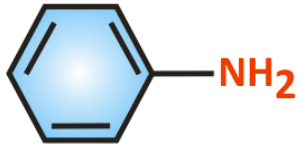
D

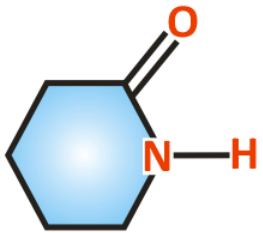


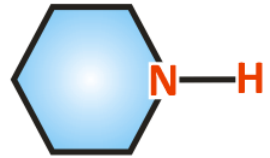
Ans. : A

Which of the following is the strongest Bronsted acid?

A 

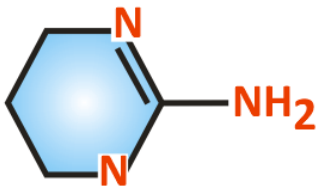
B 

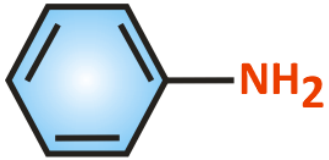
C 

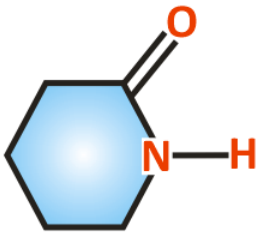
D 

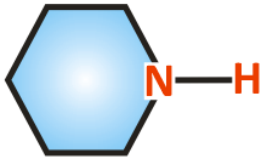
Ans. : C

Which of the following is the strongest Bronsted base?

A 

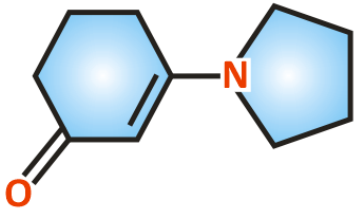
B 

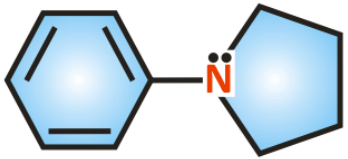
C 

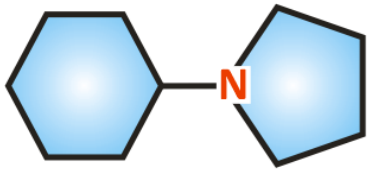
D 

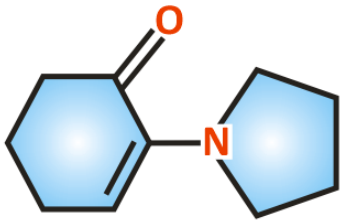
Ans. : A

Which of the following is the weakest Bronsted base?

A 

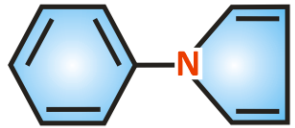
B 

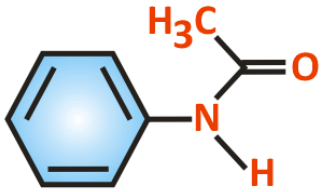
C 

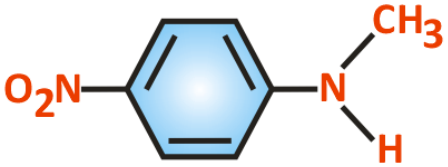
D 

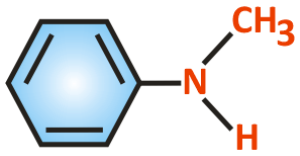
Ans. : A

Which of the following is strongest Bronsted base?

A 

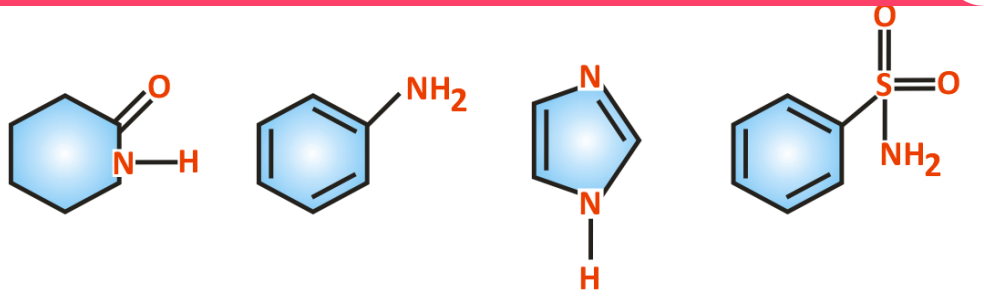
B 

C 

D 

Ans. : D

For the following compounds, which is the strongest base and which is strongest acid?



(I) (II) (III) (IV)

A II = Strongest base,
I = Strongest acid

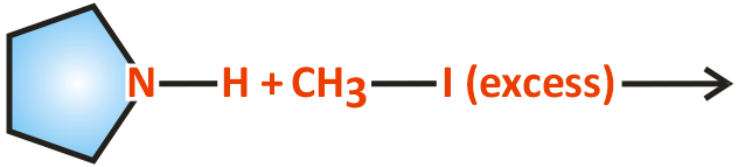
B IV = Strongest base,
III = Strongest acid

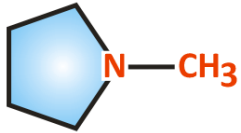
C III = Strongest base,
IV = Strongest acid

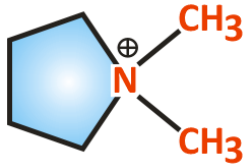
D II = Strongest base,
III = Strongest acid

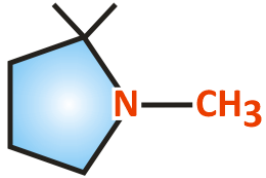
Ans. : C

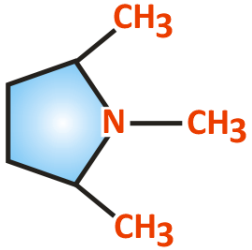
Which compound is the likely product from following reaction?



A 

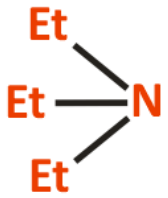
B 

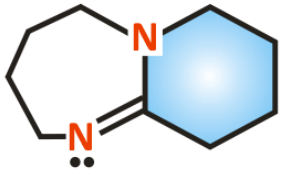
C 

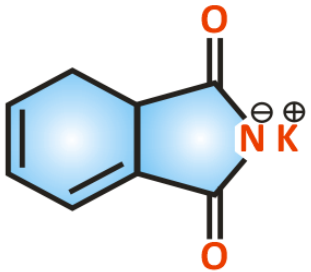
D 

Ans. : B

Which of these is the strongest base?

A 

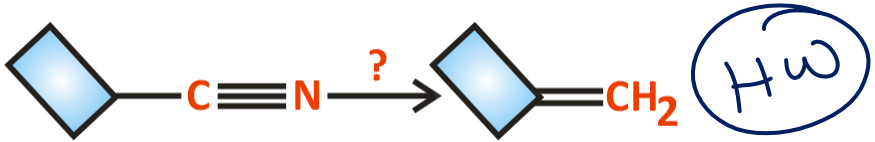
B 

C 

D 

Ans. : D

What sequence of reaction would best accomplish the following reaction?



A $LiAlH_4$, $3CH_3I$ / AgOH, Δ

B $LiAlH_4$, P_2O_5 / Δ

C 20% H_2SO_4 / Δ, P_2O_5 / Δ

D H_2, Pd – $BaSO_4$

Ans. : A

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