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Q-1 - 12675960

Which of the following compounds will form a hydrocarbon on reaction with a Grignar reagent ?



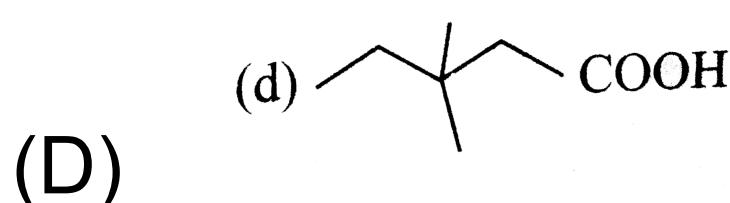
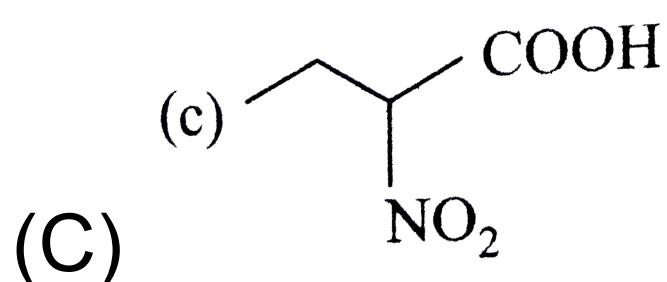
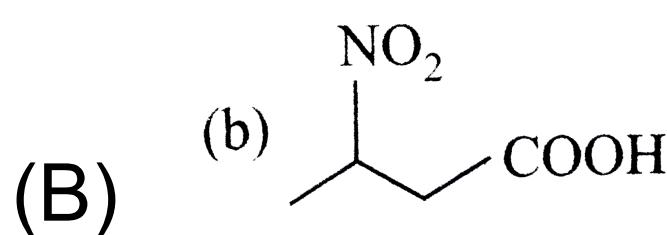
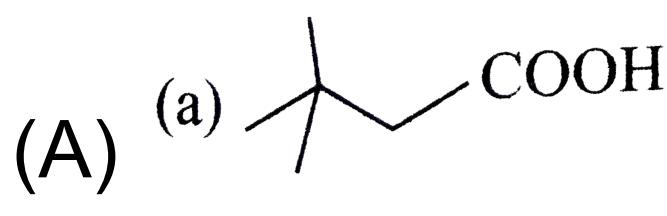
CORRECT ANSWER: D

SOLUTION:

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Q-2 - 12675961

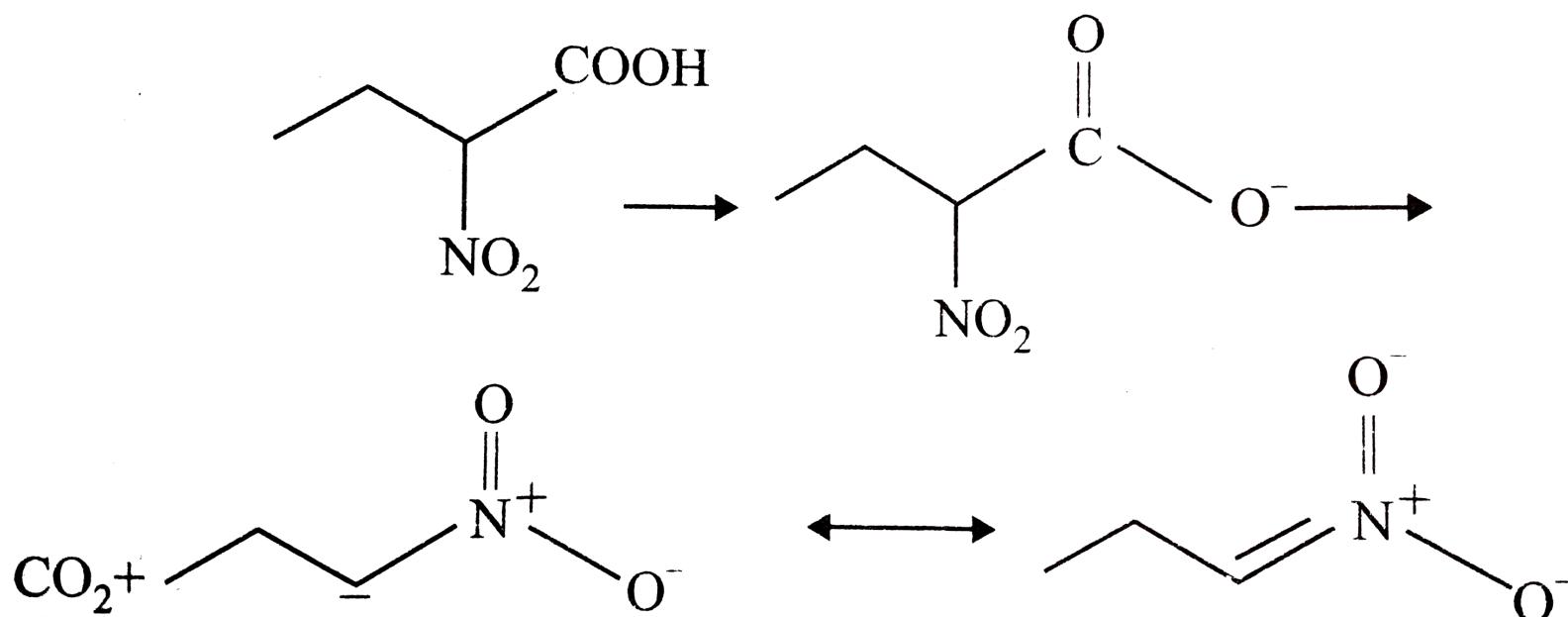
Which of the following carboxylic acid can undergo deccarboxylation on simple heating even in the absence of soda lime ?



CORRECT ANSWER: C

SOLUTION:

Carboxylic acid which forms a resonance stabilised carbanion by loss of CO_2 undergoes decarboxylation on simple heating



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Q-3 - 12675962

The reagent used for catalytic hydrogenation of an alkene as well as bringing about homogeneous catalysis is

(A) Raney nickel

(B) $(\text{Ph}_3\text{P})_3\text{RhCl}$ Wilkinson's reagent

(C) Pd / C

(D) PtO_2

CORRECT ANSWER: B

SOLUTION:

Wilkinson's catalyst brings about homogeneous catalysis as it is soluble in reaction medium. All others bring about heterogeneous catalysis as catalyst and reactants remain in different phase.

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Q-4 - 12675968

An optically active hydrocarbon X has molecular formula C_6H_{12} . X on catalytic hydrogenation gives optically inactive C_6H_{14} . X could be

(A) 3 – methyl – 1 – pentene

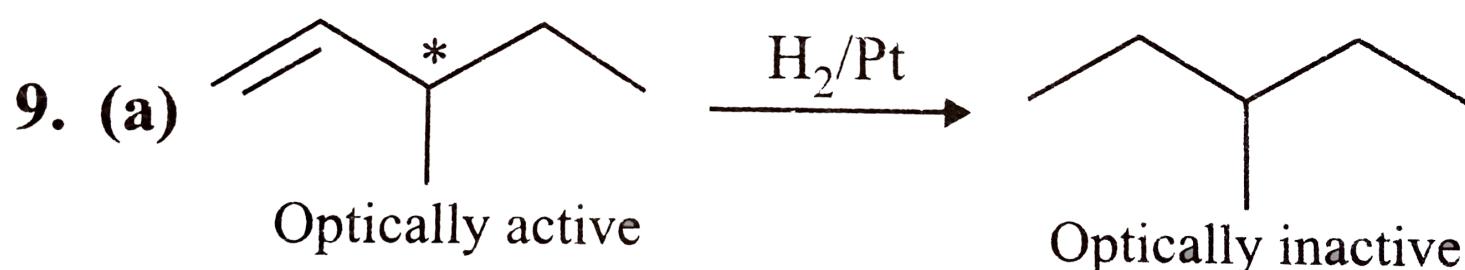
(B) 3 – methyl–2 – pentene

(C) 4 – methyl – 2 – pentene

(D) 2 – ethyl – 1 – butene

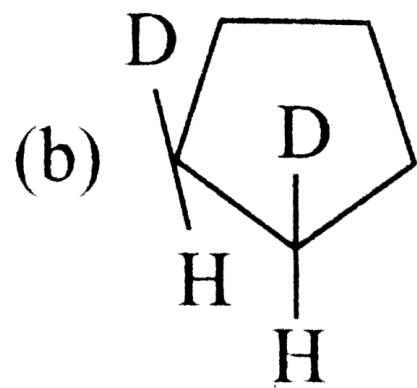
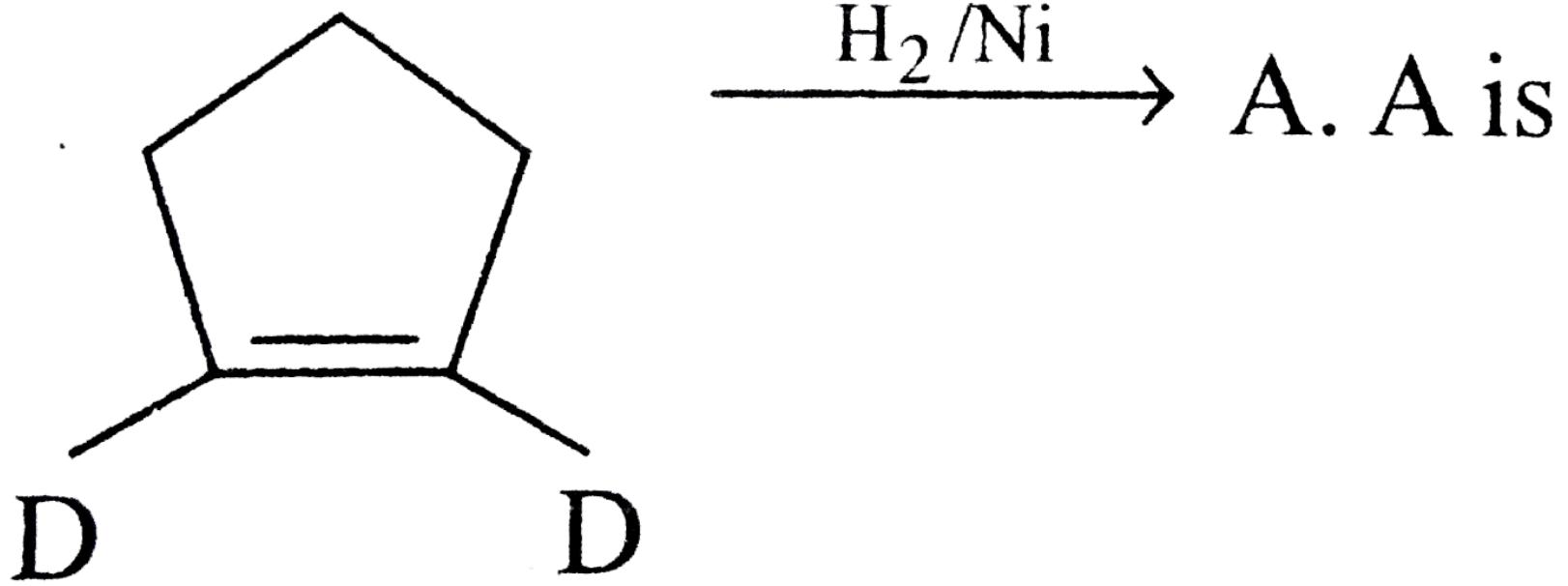
CORRECT ANSWER: A

SOLUTION:

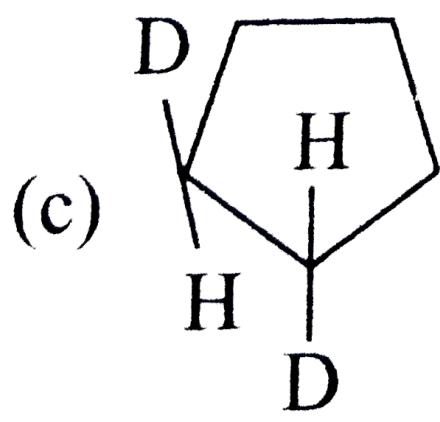


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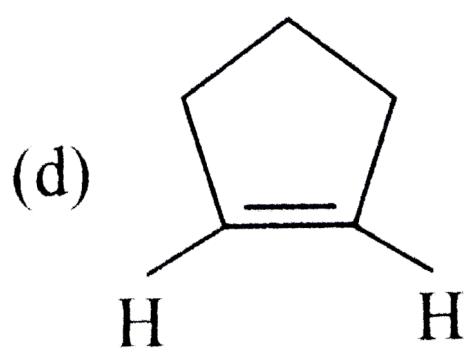
Q-5 - 12675969



(B)



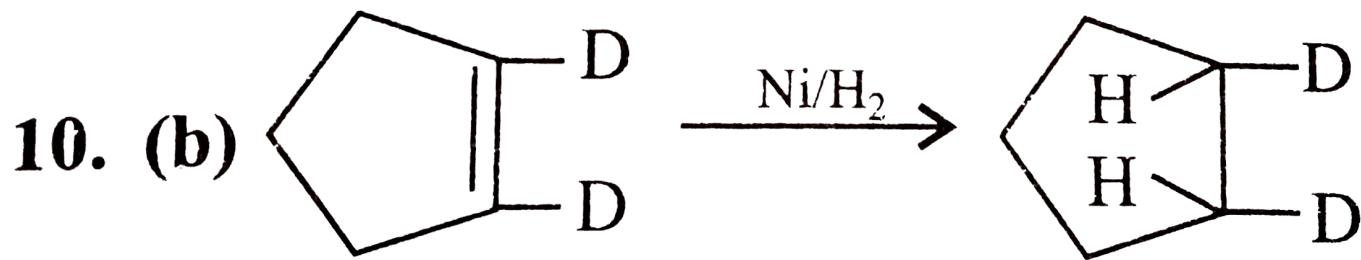
(C)



(D)

CORRECT ANSWER: B

SOLUTION:

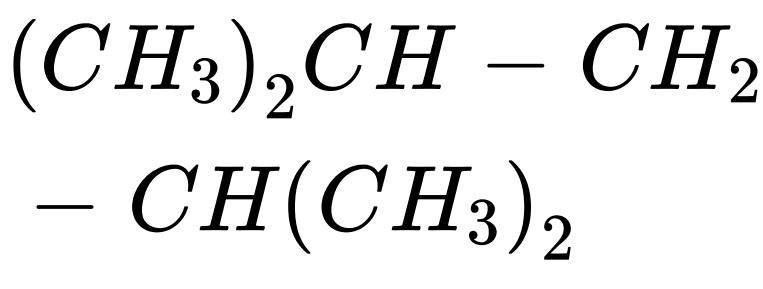


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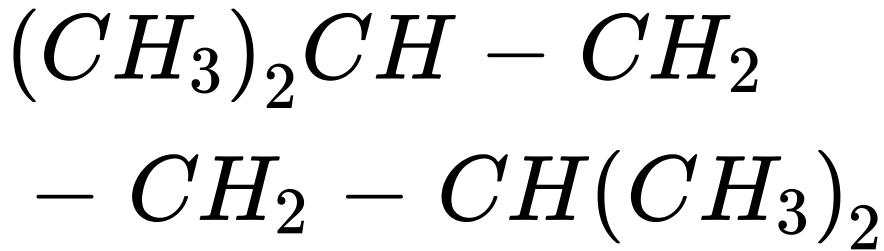
Q-6 - 12675975

Which of the following alkanes can be synthesized by the Wurtz reaction in good yield ?

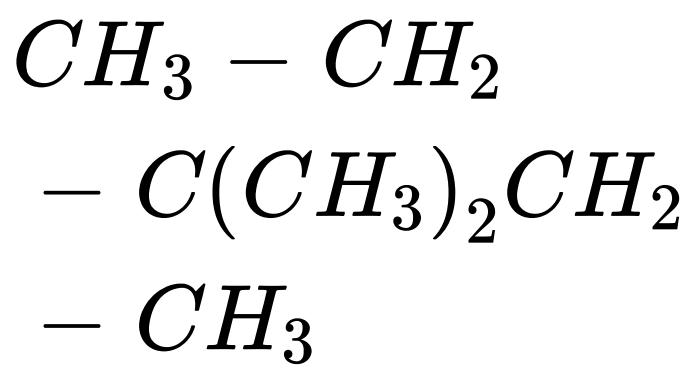
(A)



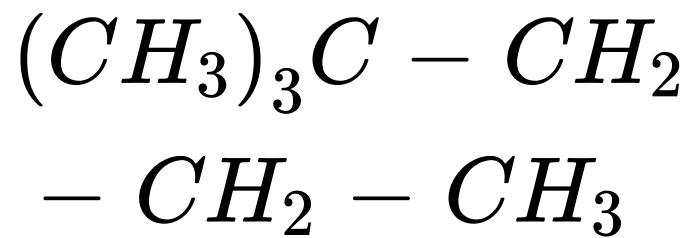
(B)



(C)



(D)



CORRECT ANSWER: B

SOLUTION:

Symmetrical alkane with even number of carbon atoms can be prepared by Wurtz reaction.

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Q-7 - 12675978

During the preparation of ethane by Kolbe's electrolytic method using inert electrode the pH of the electrolyte

(A) (a) Increases progressively as the reaction proceeds

(B) (b) Decreases progressively as the reaction proceeds

(C) (c) Remains constant throughout the reaction

(D) (d) May decrease as the concentration of the electrolyte is not very high

CORRECT ANSWER: A

SOLUTION:

In Kolbe's electrolysis method using electrolytic method using inert electrode the *pH* of the electrolyte increases progressively as the reaction proceed

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Q-8 - 12675978

During the preparation of ethane by Kolbe's electrolytic method

using inert electrode the *pH* of the electrolyte

- (A) (a) Increases progressively as the reaction proceeds
- (B) (b) Decreases progressively as the reaction proceeds
- (C) (c) Remains constant throughout the reaction
- (D) (d) May decrease as the concentration of the electrolyte is not very high

CORRECT ANSWER: A

SOLUTION:

In Kolbe's electrolysis method using electrolytic method using inert electrode the *pH* of the electrolyte increases progressively as the reaction proceed

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Halogenation of alkanes is an example of

- (A) (a) Free radical addition reaction
- (B) (b) Free radical substitution reaction
- (C) (c) Nucleophilic substitution reaction
- (D) (d) Nucleophilic addition reaction

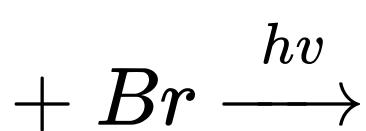
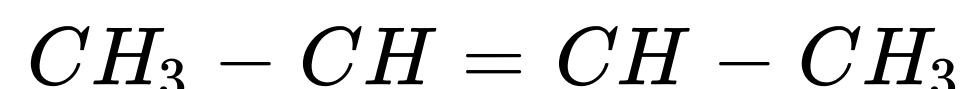
CORRECT ANSWER: B

SOLUTION:

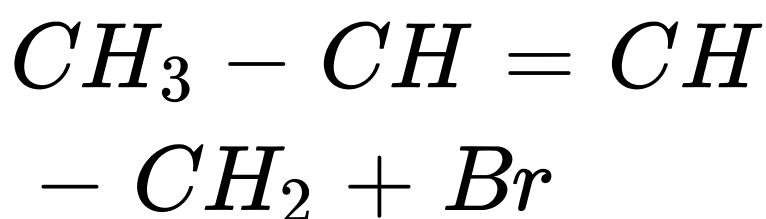
b

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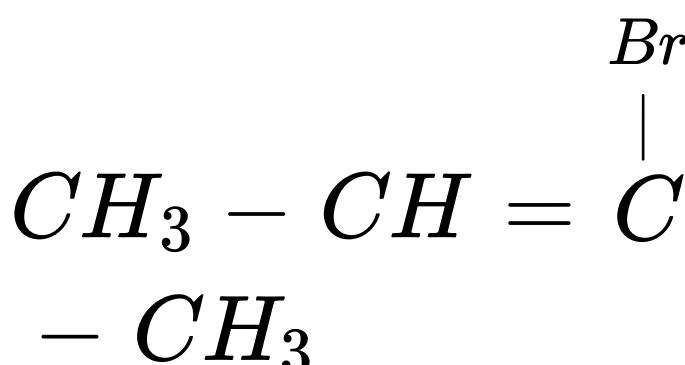
What is the major bromination product in the following reaction ?



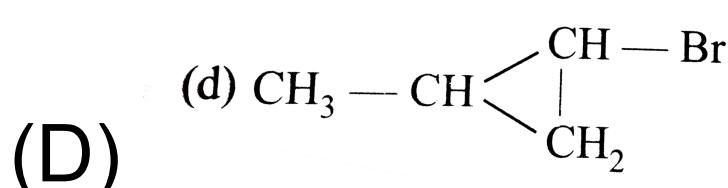
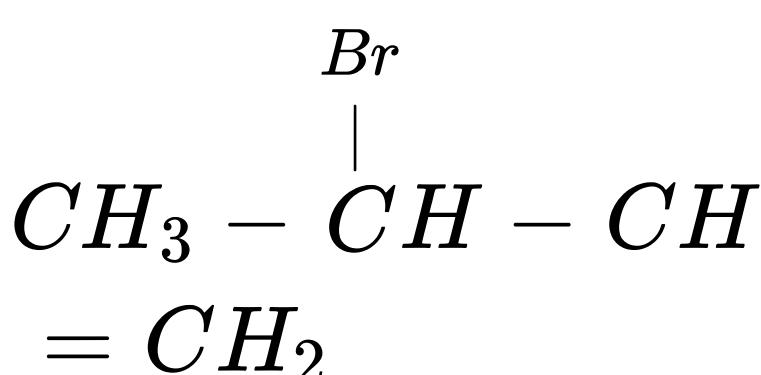
(A) (a)



(B) (b)

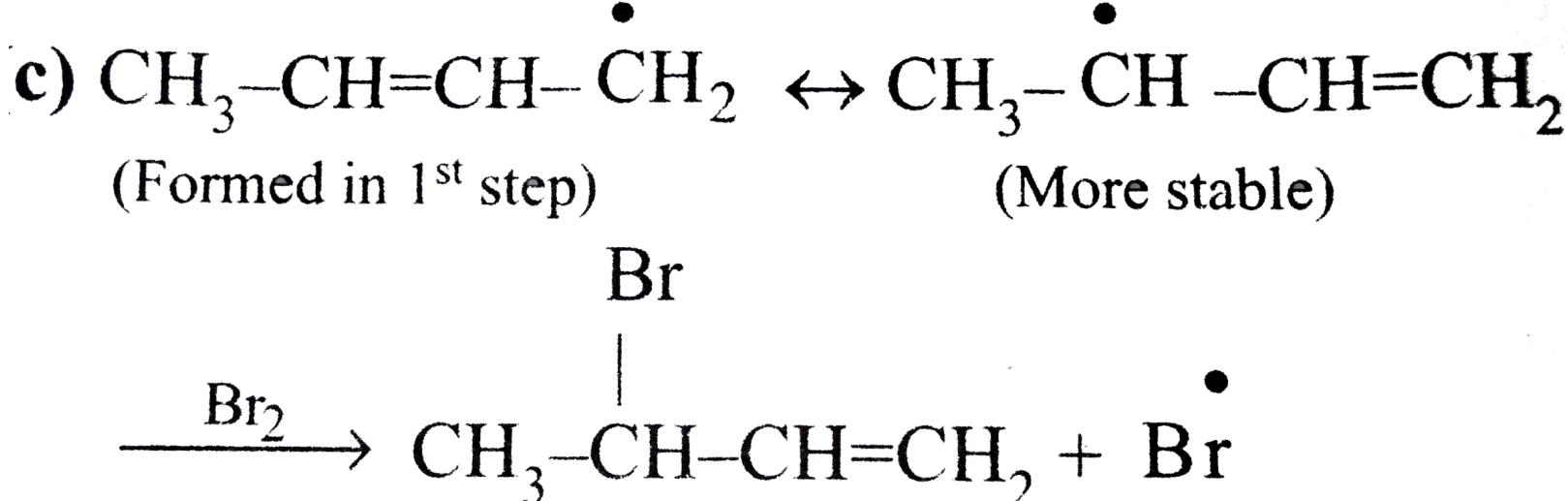


(C) (c)



CORRECT ANSWER: C

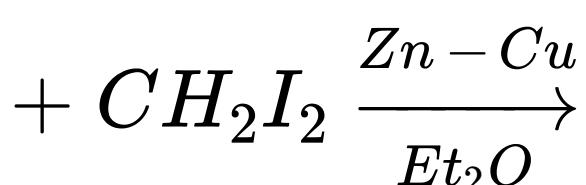
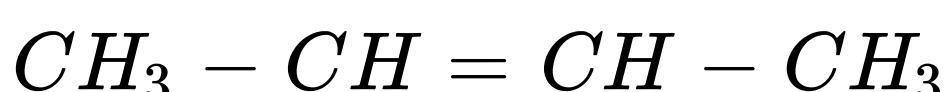
SOLUTION:



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Q-11 - 12675994

What is true about the reaction given below ?

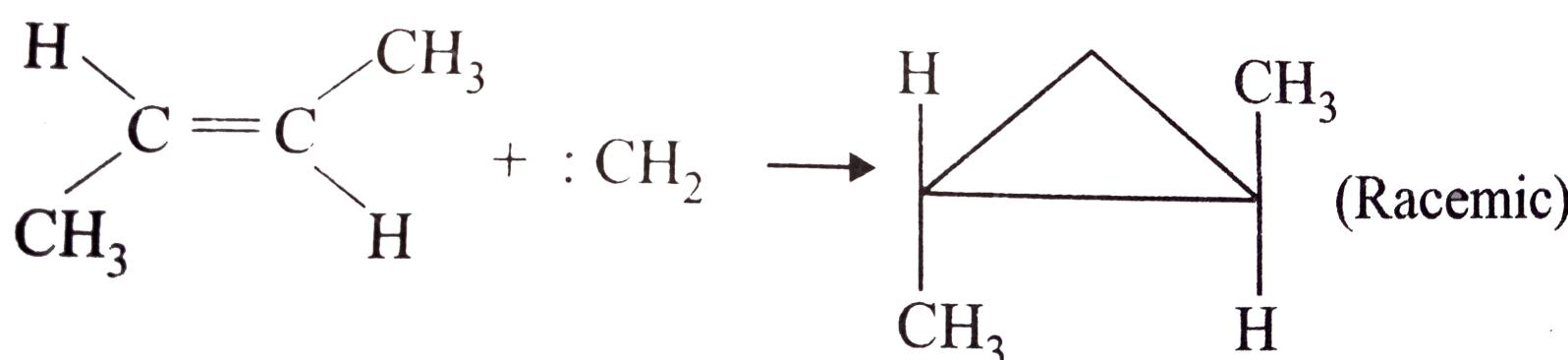
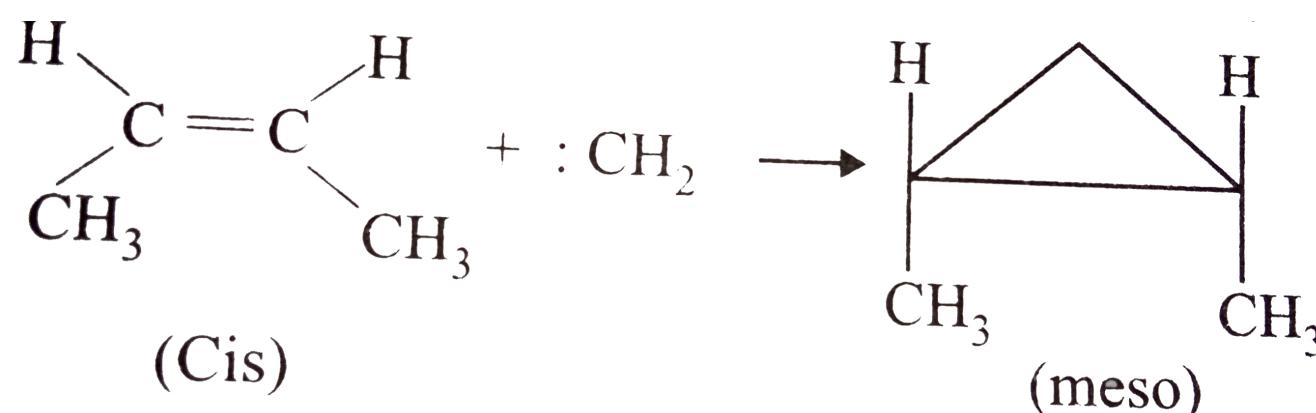


- (A) Reaction involves a carbocation intermediate
- (B) Reaction involves a carbanion intermediate
- (C) Meso or racemic products are formed depending on configuration at double bond
- (D) Product is an acyclic alkane

CORRECT ANSWER: C

SOLUTION:

Reaction involves CH_2 intermediate and it undergoes syn – addition at double bond, hence stereochemistry of products depends on stereochemistry at double bond as :



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Q-12 - 12675996

Which of the following is oxidised by $KMnO_4$?

- (A) Methane

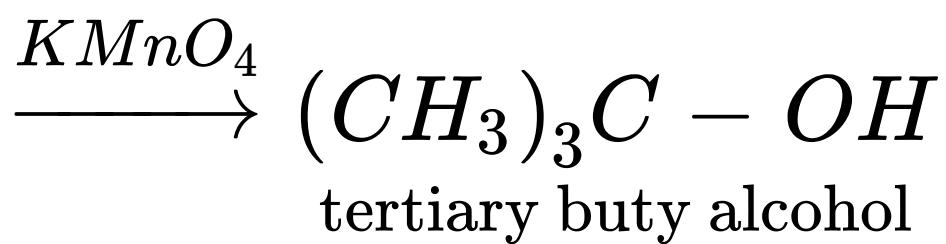
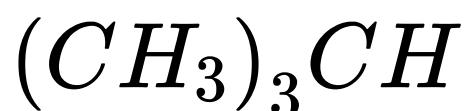
(B) Isobutane

(C) Pentane

(D) Neopentane

CORRECT ANSWER: B

SOLUTION:



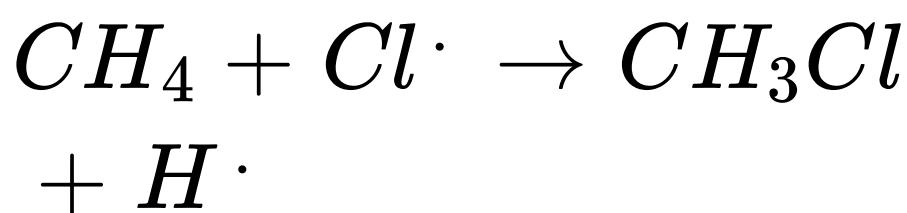
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Q-13 - 12676001

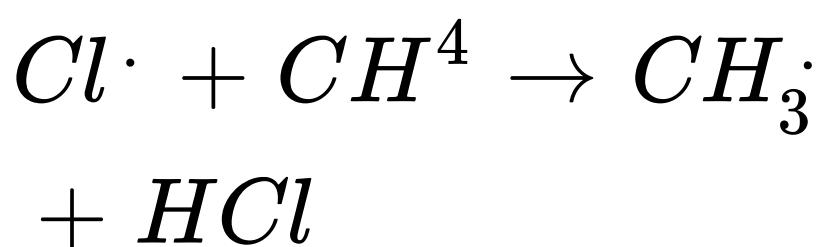
Which of the following cannot be considered as a step of mechanism in chain reaction of methane with Cl_2 ?

(A) $Cl_2 \rightarrow Cl\cdot$

(B)



(C)



CORRECT ANSWER: B

SOLUTION:

b

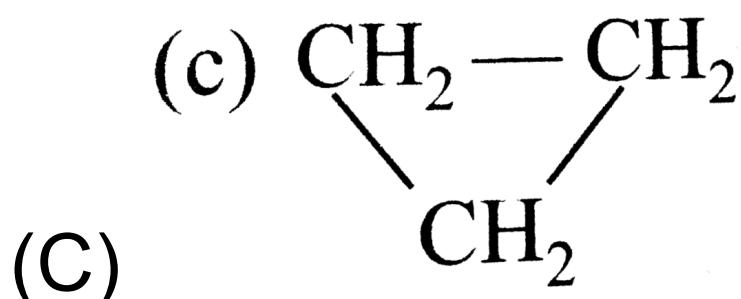
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Q-14 - 12676006

$BrCH_2 - CH_2CH_2Br$ reacts with Na in the presence of ether at $100C$ to produce

(A) $BrCH_2 - CH = CH_2$

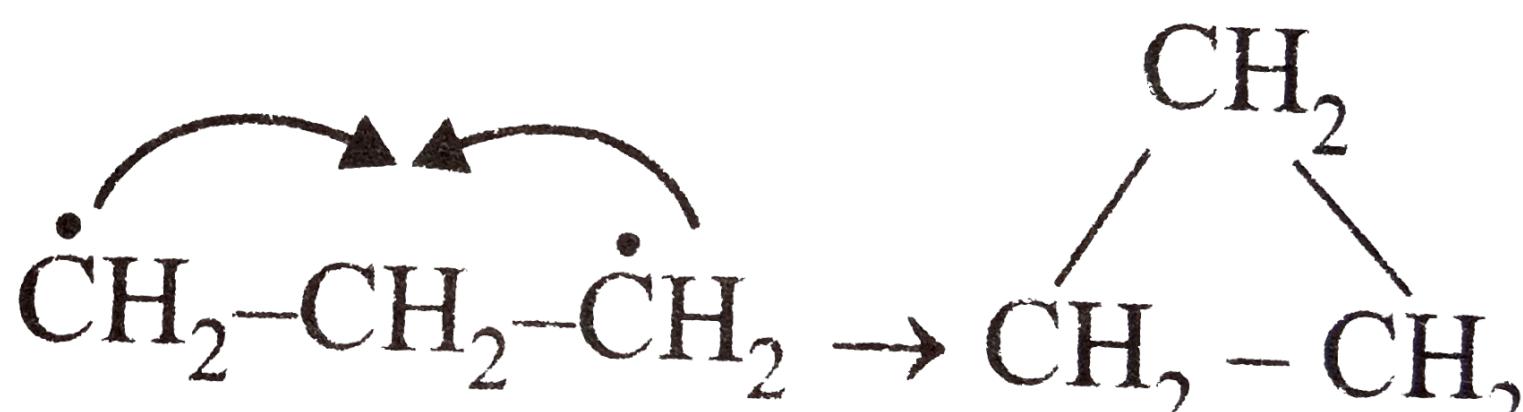
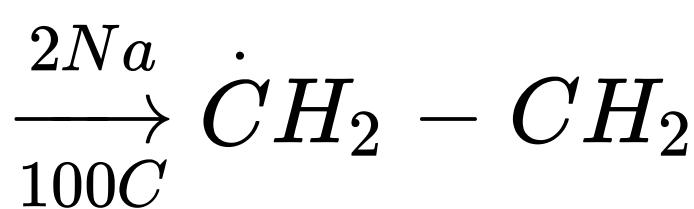
(B) $CH_2 = C = CH_2$



(D) All of these

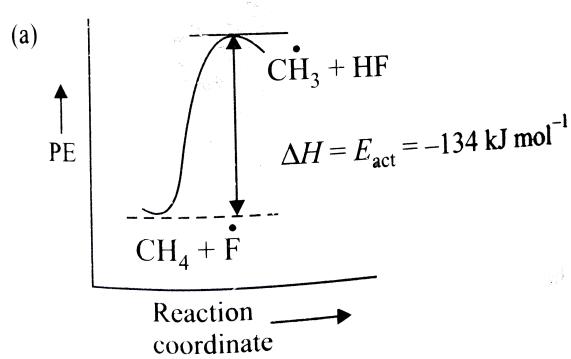
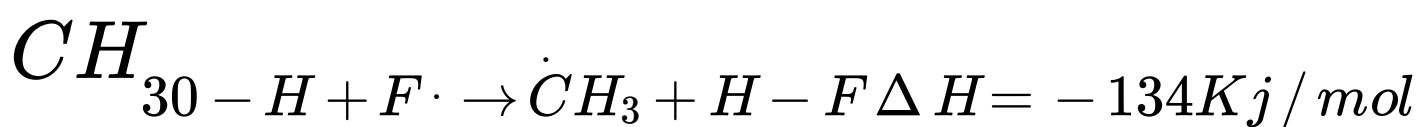
CORRECT ANSWER: C

SOLUTION:

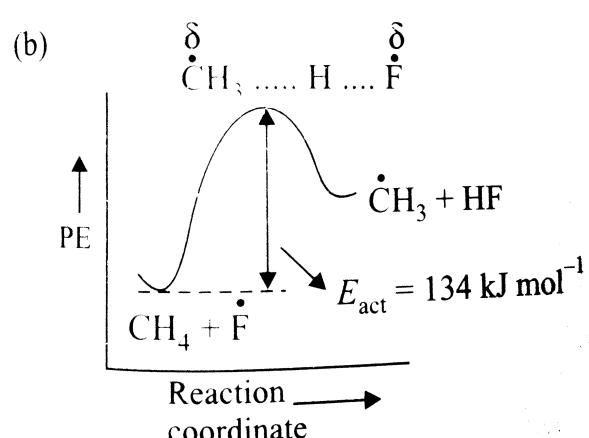


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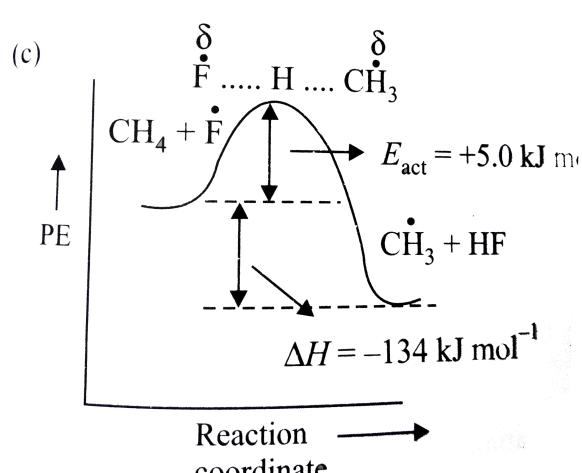
Which of the following is correct potential energy diagram for the given chain propagation step ?



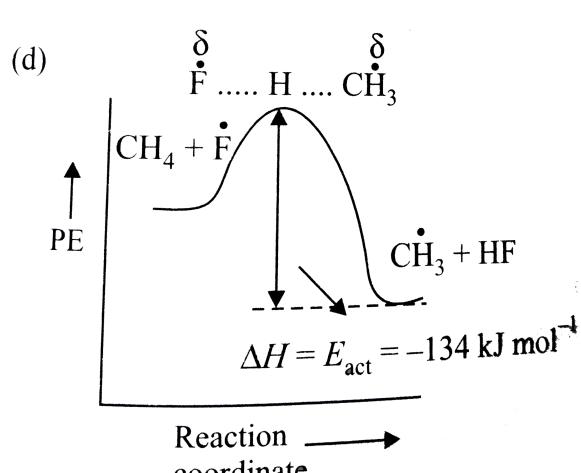
(A)



(B)



(C)



(D)

CORRECT ANSWER: C

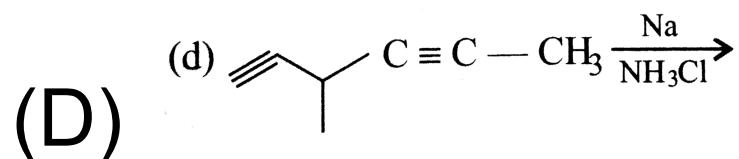
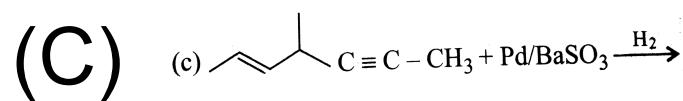
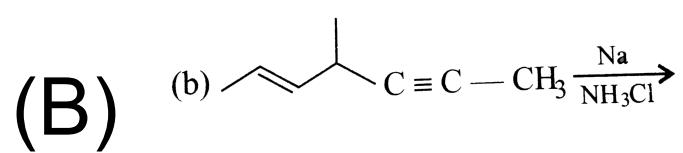
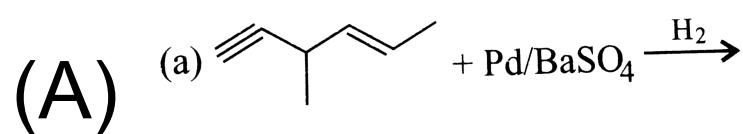
SOLUTION:

Initial and final energy difference will be -134 kJ/mol .

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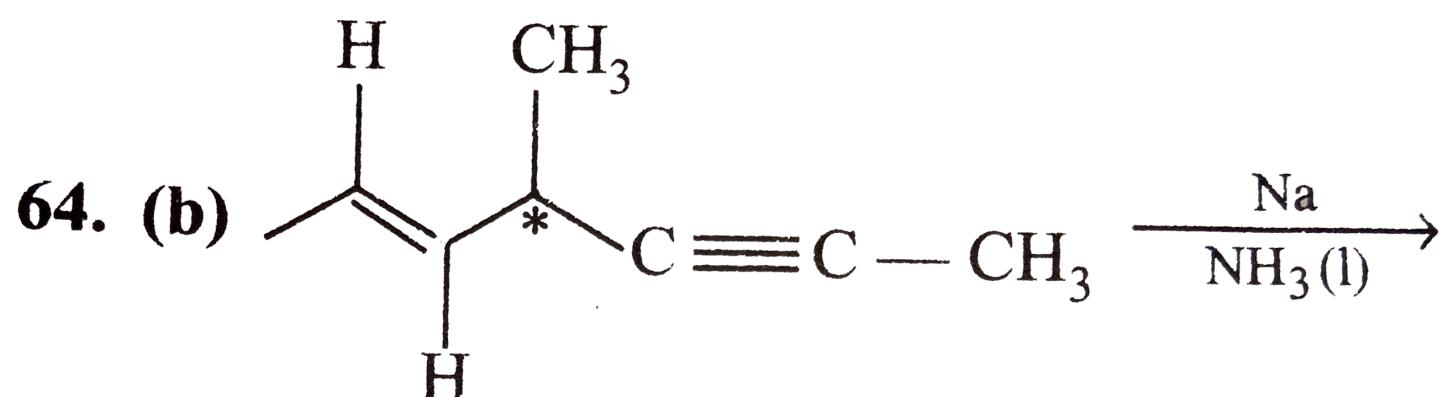
Q-16 - 12676034

Which of the following compounds will lose optical activity after the reaction?

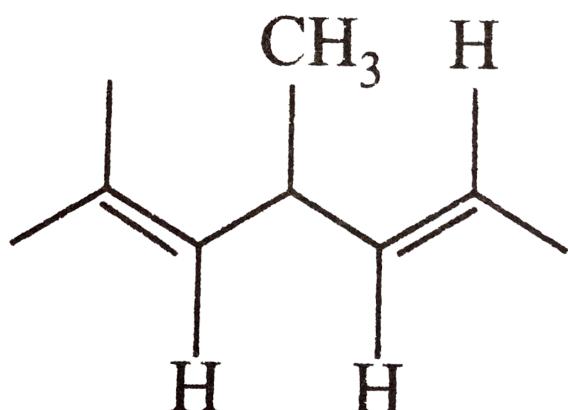


CORRECT ANSWER: B

SOLUTION:



trans (optically active)



trans-trans (optically inactive)

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Q-17 - 12676036

sec – Butyl chloride on boiling with alc. KOH gives as the main product.

(A) 1 – Butene

(B) 2 – Butene

(C) 1 – Butanol

(D) 2 – Butanol

CORRECT ANSWER: B

SOLUTION:

b

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Q-18 - 12676038

An alkene is formed from a carbocation by

(A) Elimination of a H^+ ion

(B) Elimination of H^- ion

(C) Addition of a H^+ ion

(D) Addition of a H^- ion

CORRECT ANSWER: A

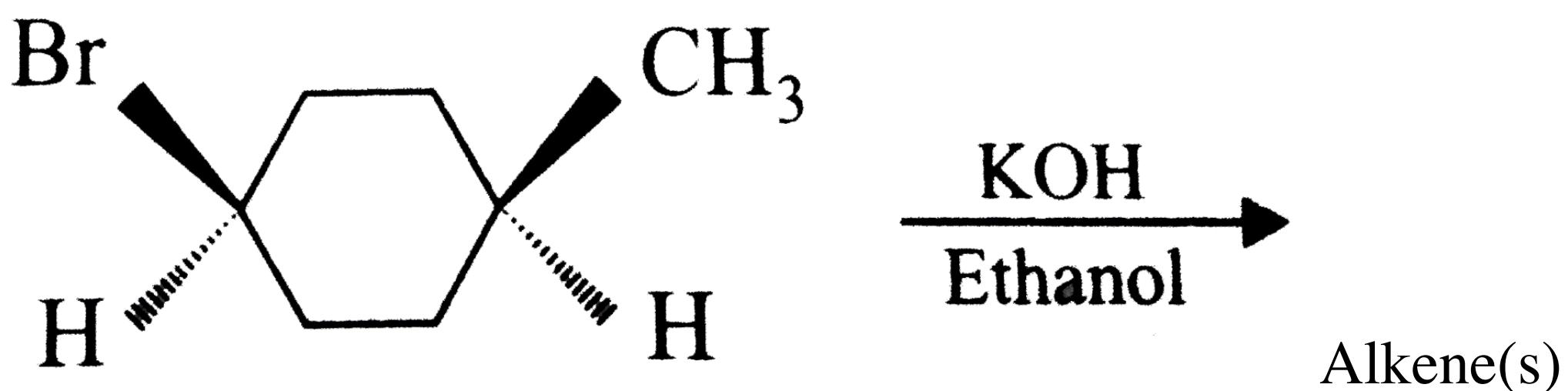
SOLUTION:

a

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Q-19 - 12676039

Consider the following reaction.



The correct statement concerning product of the above reaction is

- (A) only a single alkene is formed
- (B) a pair of geometric isomers are formed
- (C) a pair of enantiomers in equal amount is formed
- (D) a pair of diastereomers in equal amount is formed

CORRECT ANSWER: C

SOLUTION:



I and *II* are enantiomers formed in equal amounts.

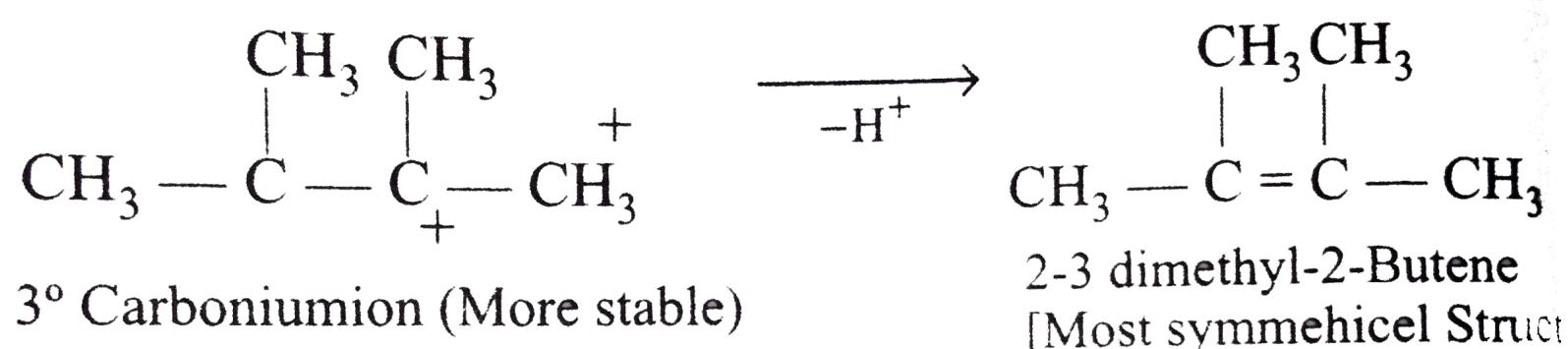
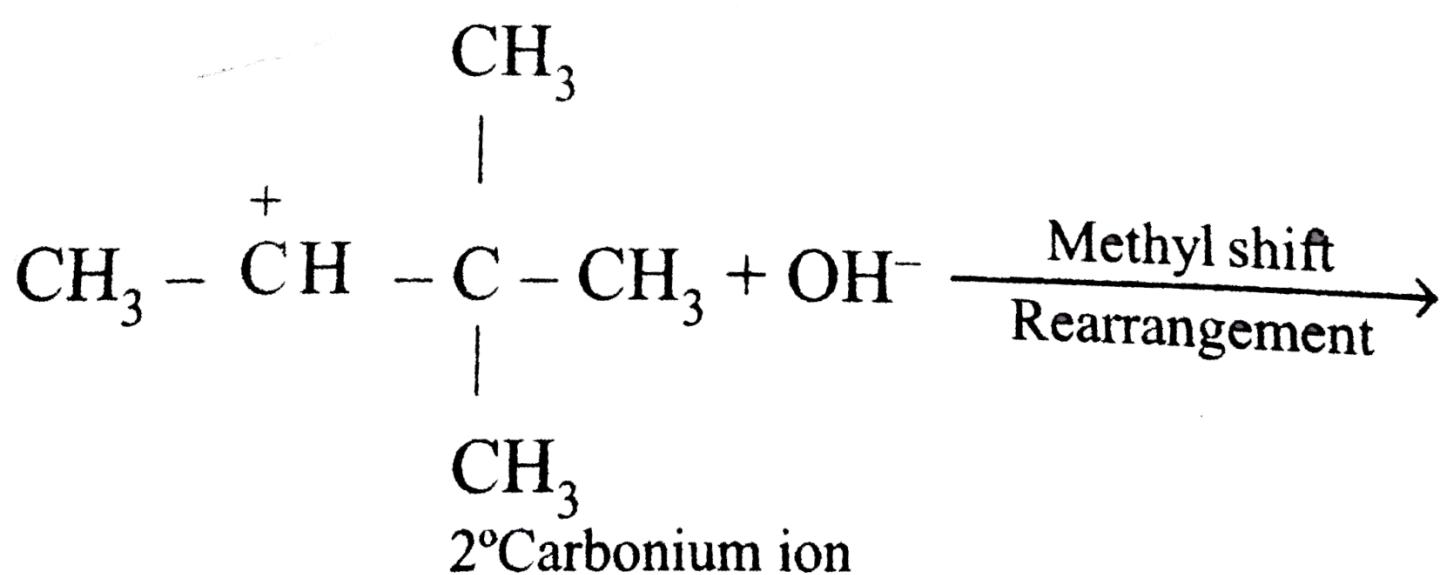
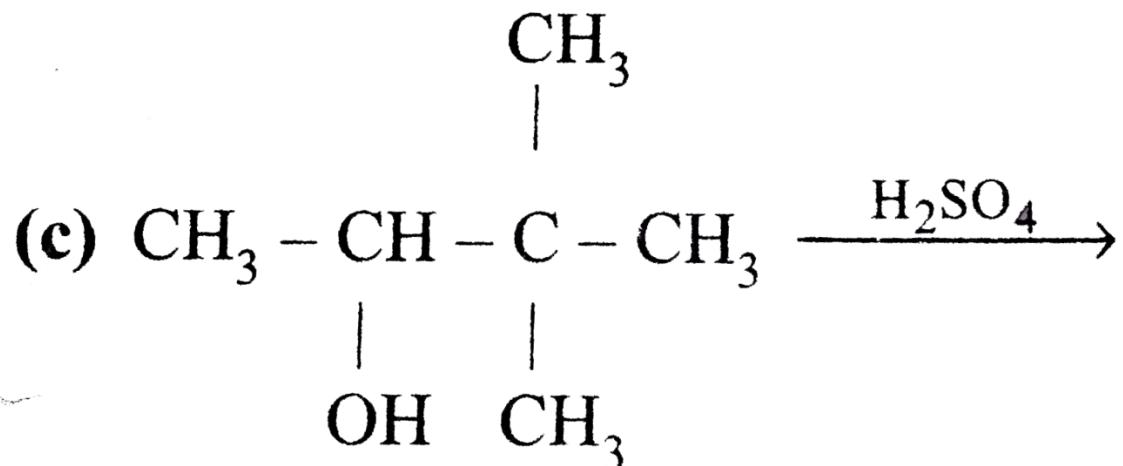
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When 3, 3 – dimethyl–2 – butanol is heated with H_2SO_4 the major product obtained is

- (A) *cis* and trans isomers of 2, 3 – dimethyl–2 – butene
 - (B) 3, 3 – dimethyl–1 – butene
 - (C) 2, 3 – dimethyl–2 – butene
 - (D) 2, 3 – dimethyl–1 – butene
-

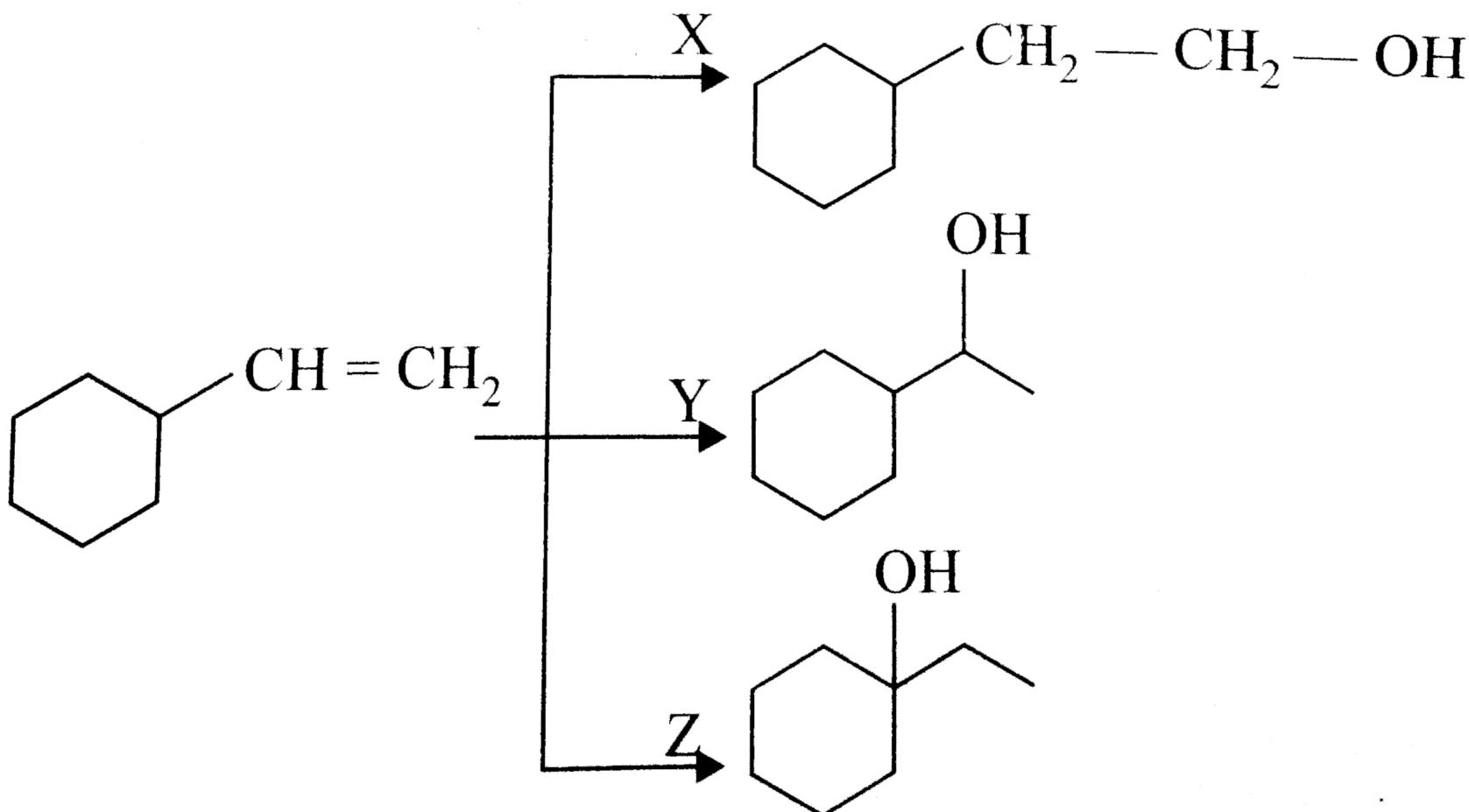
CORRECT ANSWER: C

SOLUTION:



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Q-21 - 12676046



X, Y, Z reaction are :

(A) Simple hydration reaction

(B) Hydroboration — oxidation, hydration and

oxymercuration — demercuration

(C) Hydroboration — oxidation, oxymercuration —

demercuration and hydration

(D) Oxymercuration — demercuration, hydroboration —

oxidation and hydration

CORRECT ANSWER: C

SOLUTION:

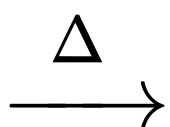
X – Hydroboration – oxidation, Y = oxymercuration
– demercuration, Z = Simple hydration reaction.

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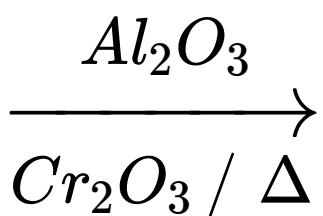
Q-22 - 12676047

Which of the following reactions produces an alkene ?

(A)



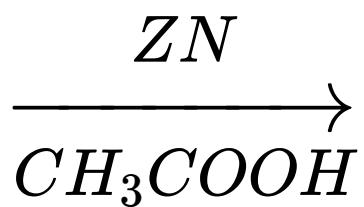
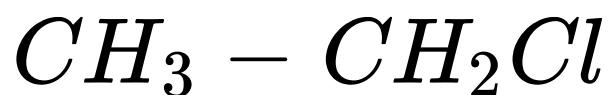
(B)



(C) $\text{CH}_3\text{CH}(\text{O})\text{CH}_3$



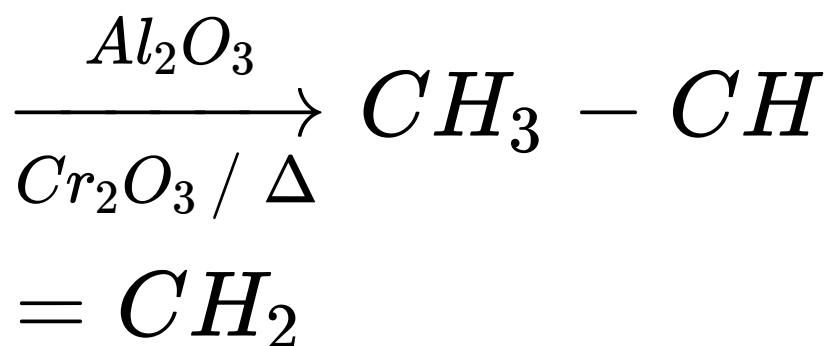
(D)



CORRECT ANSWER: B

SOLUTION:

Cr_2O_3 / Al_2O_3 is a good catalyst used to bring about dehydrogenation reaction.



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Q-23 - 12676054

During debromination of meso – dibromobutane, the major

compound formed is

(A) n – butane

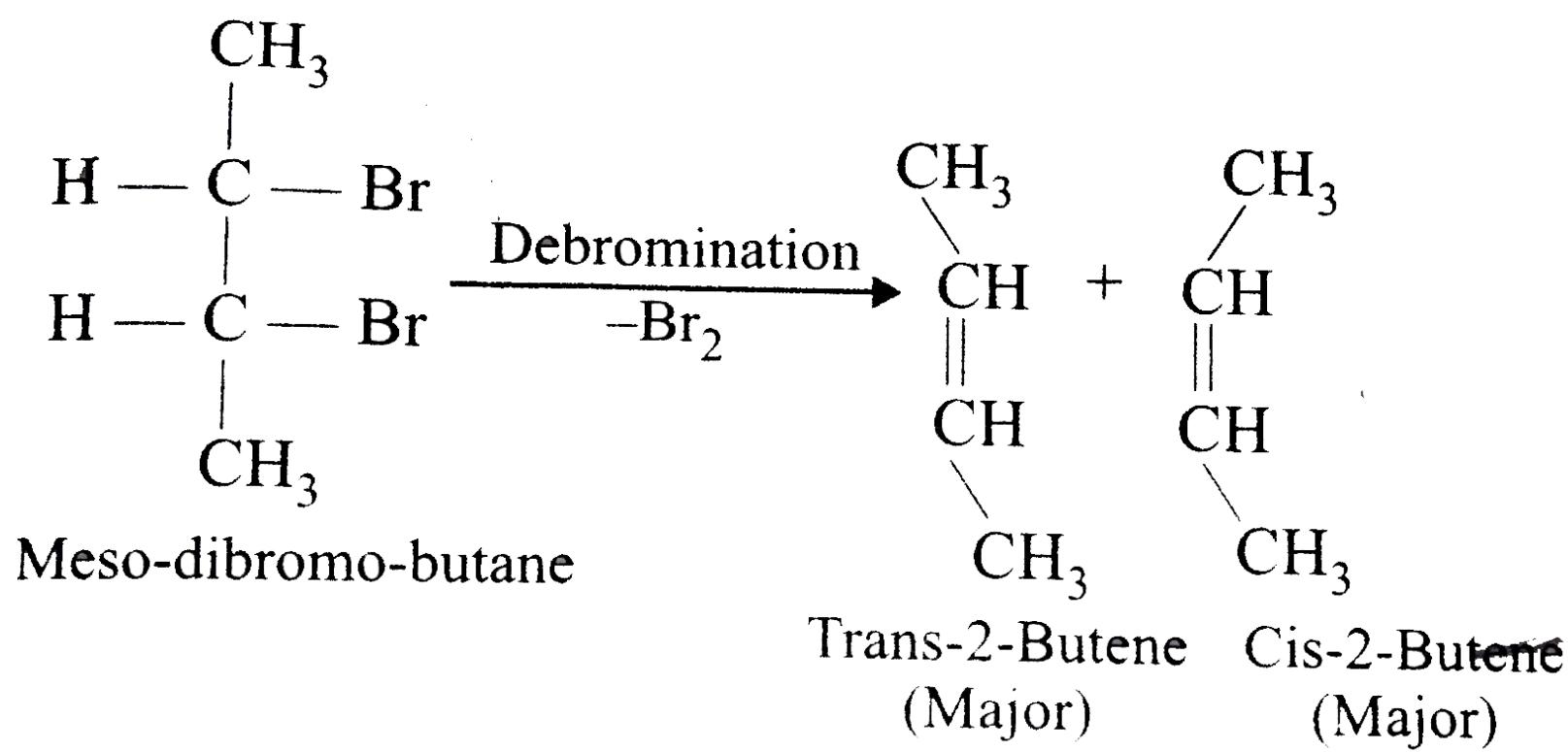
(B) 1 – butane

(C) trans – 2 – butene

(D) cis – 2 – butene

CORRECT ANSWER: C

SOLUTION:



Trans – 2 – butene is more stable than its cis isomer.

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A mixture of 1 – chloropropane and 2 – chloropropane which treated with alcoholic *KOH* gives

(A) 1 – propene

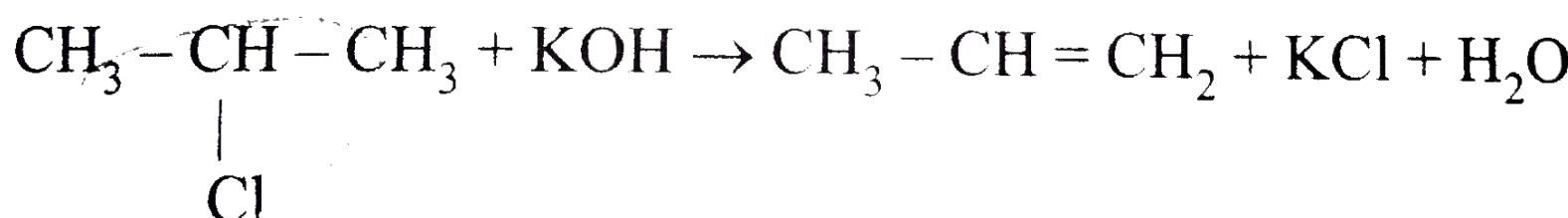
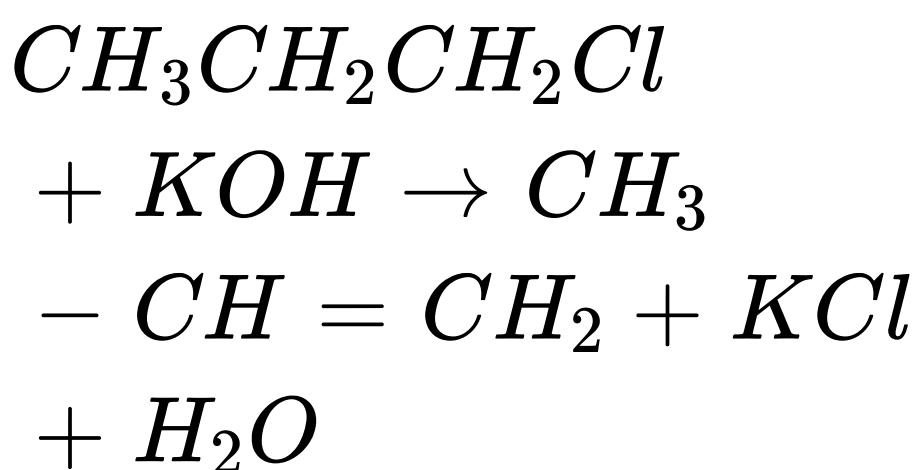
(B) 2 – propene

(C) Isopropylene

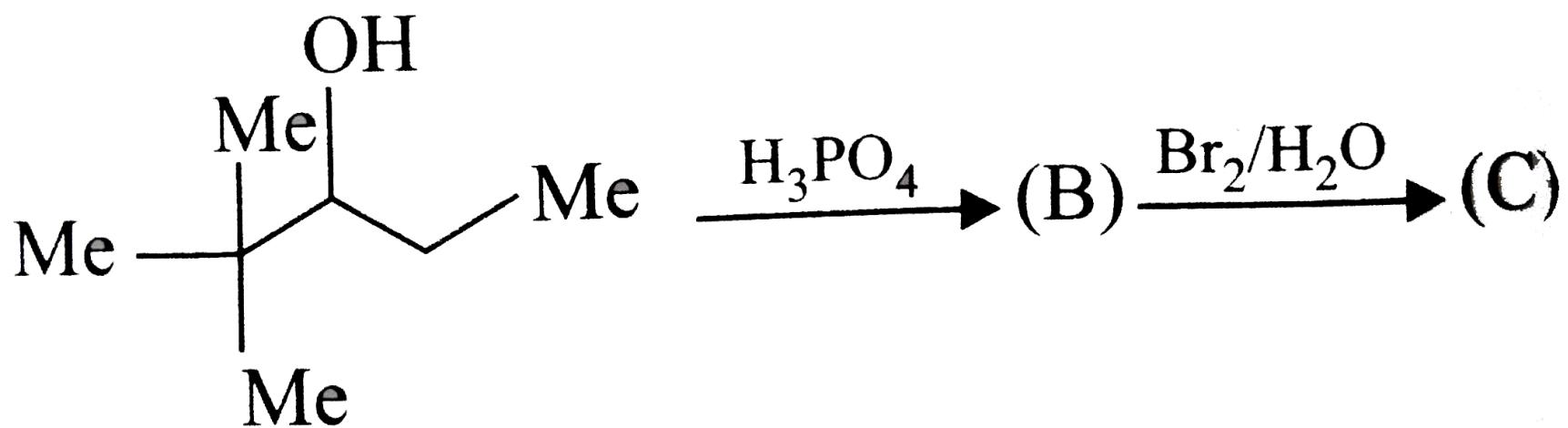
(D) All the three

CORRECT ANSWER: A

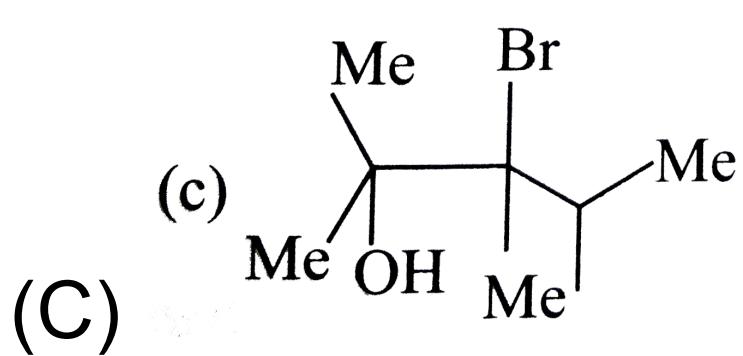
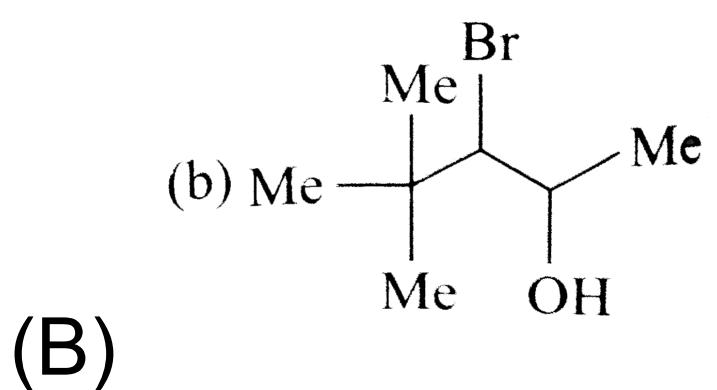
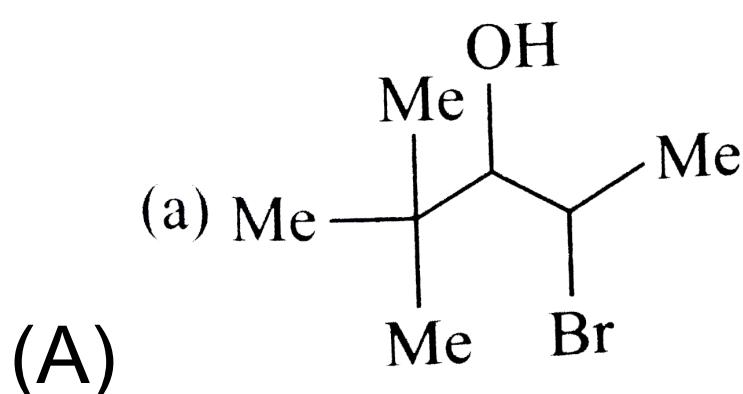
SOLUTION:

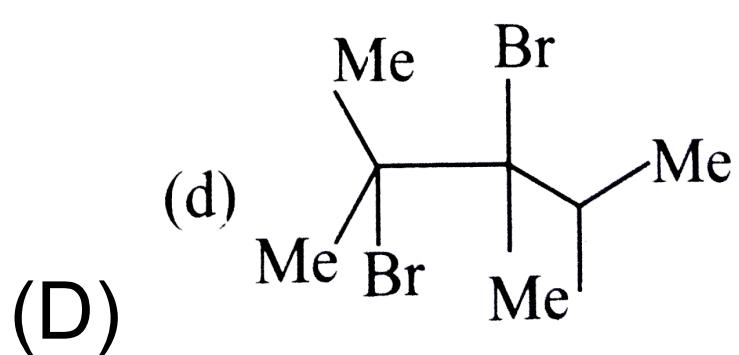


Q-25 - 12676056



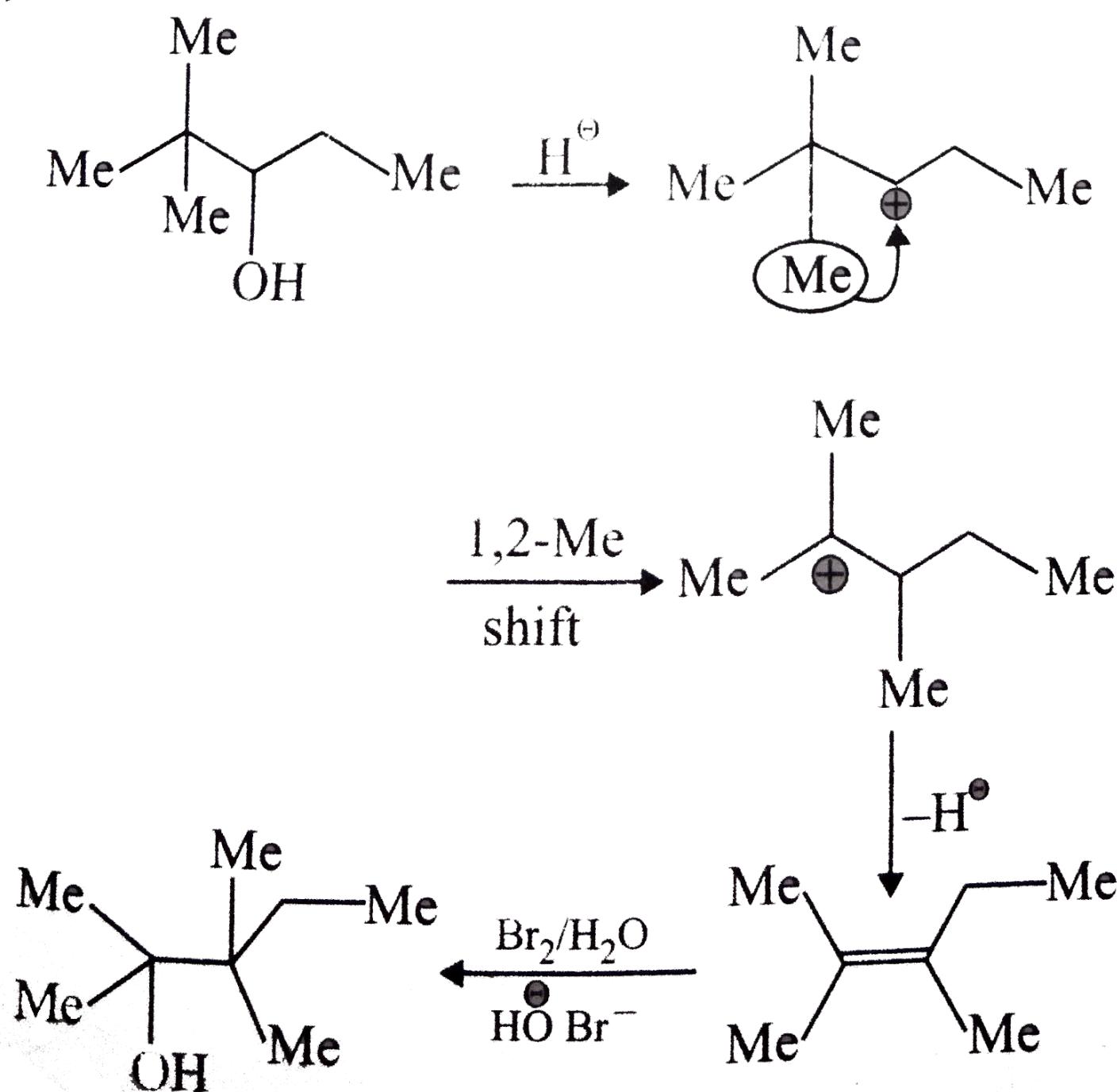
Compound (C) is:





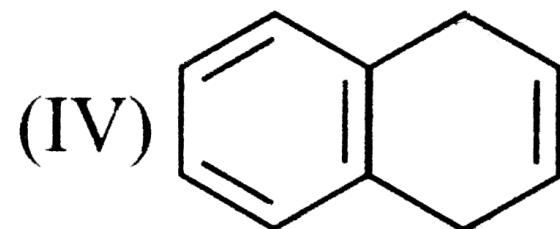
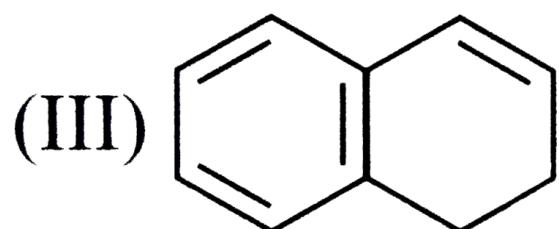
CORRECT ANSWER: C

SOLUTION:



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The correct order of reactivity towards electrophilic addition reaction :



- (A) $II > I > IV > III$

(B) $III > I > IV > II$

(C) $I > III > IV > II$

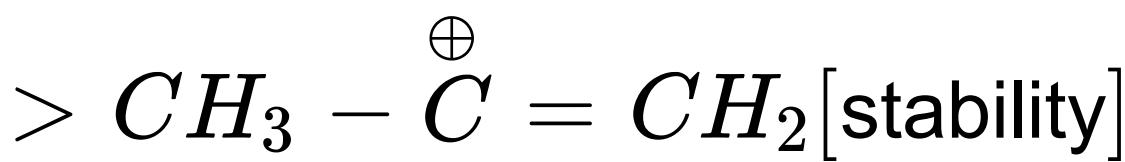
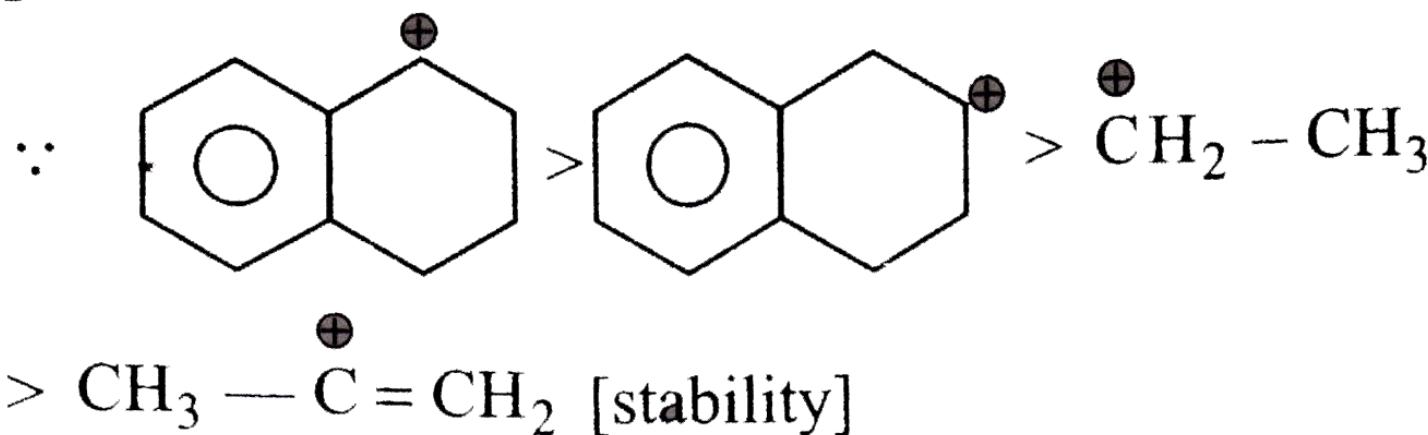
(D) $III > IV > II > I$

CORRECT ANSWER: D

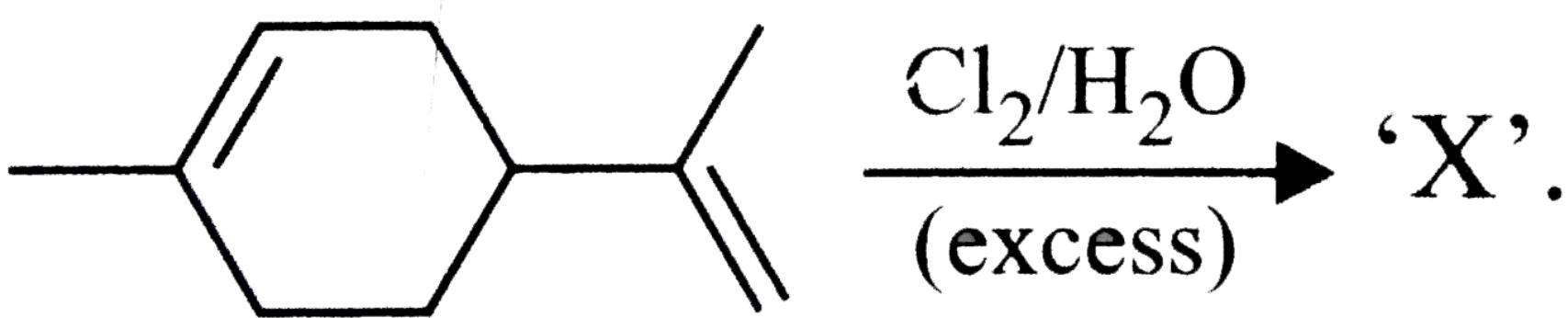
SOLUTION:

Rate of electrophilic addition reaction \propto a stability of C^+ produced

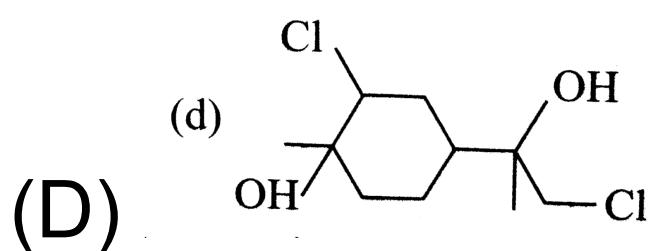
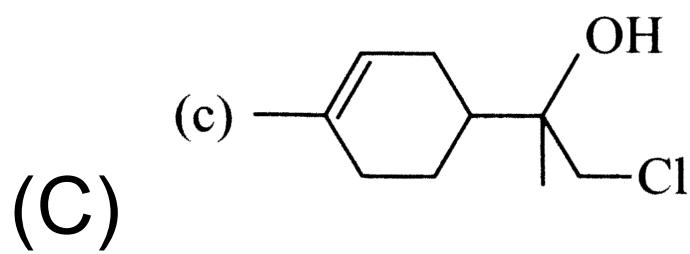
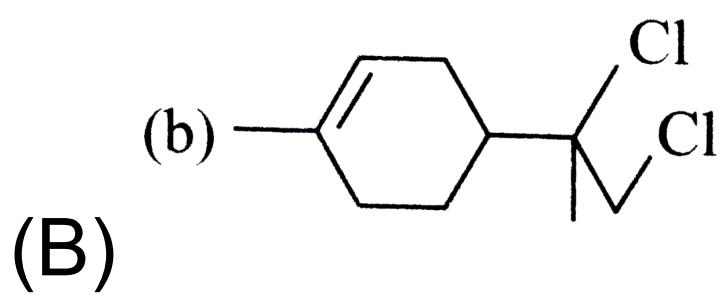
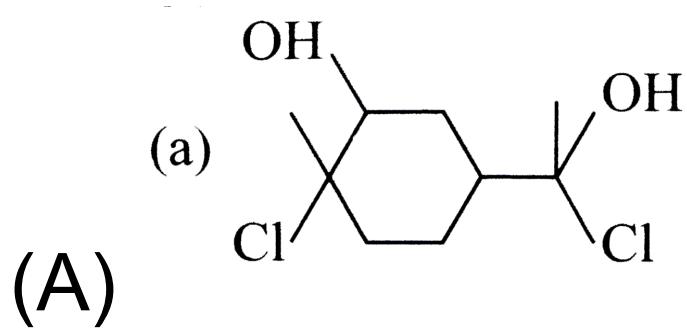
C^+ produced



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Compound 'X' will be :

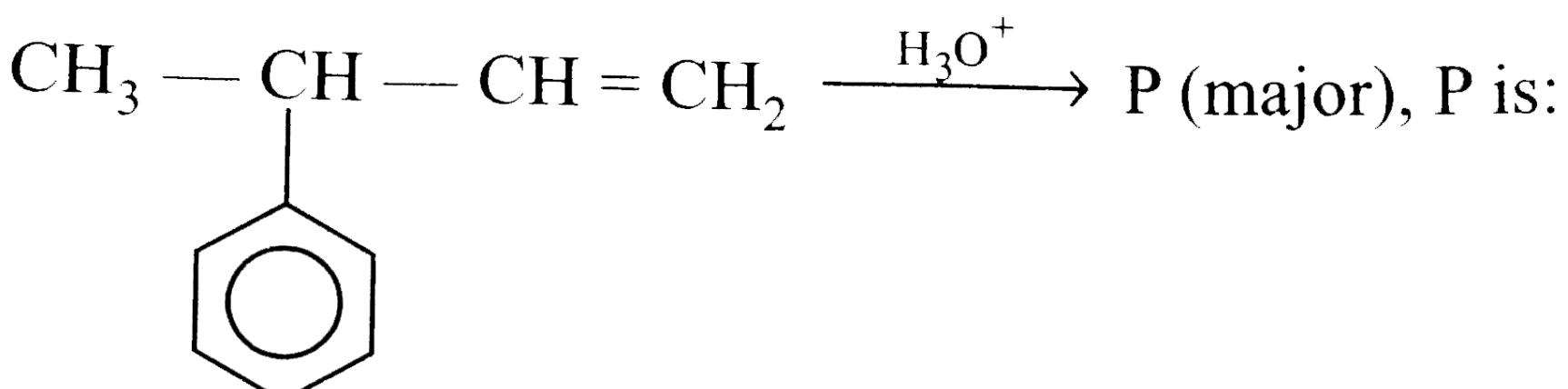


CORRECT ANSWER: D

SOLUTION:

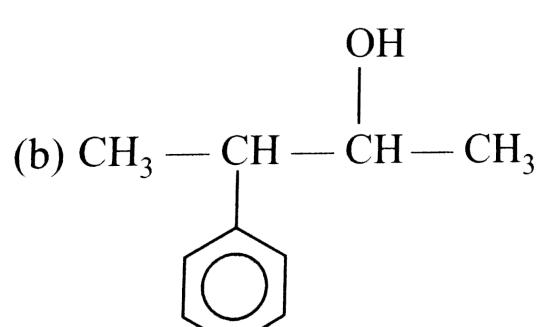
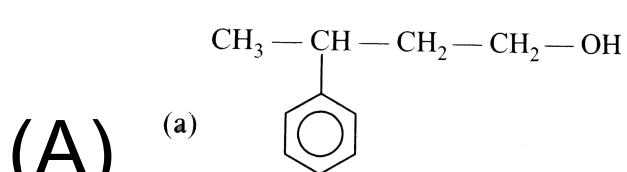
d

Q-28 - 12676067

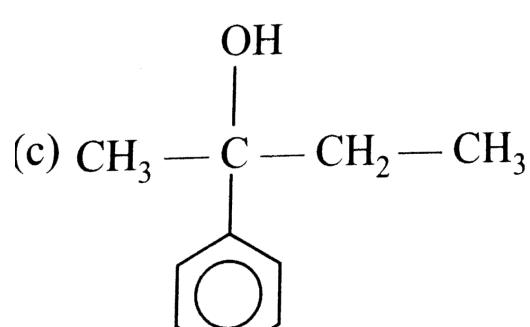


P(major) *pis*

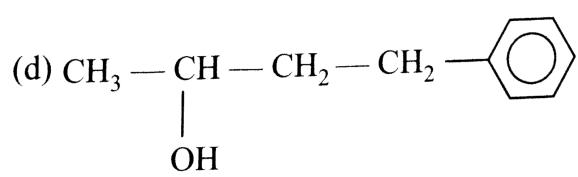
∴



(B)



(C)



(D)

CORRECT ANSWER: C

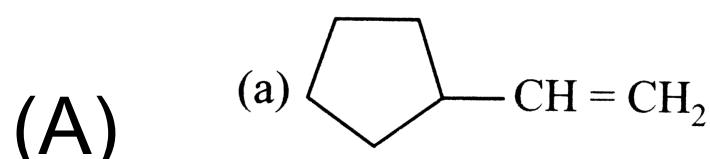
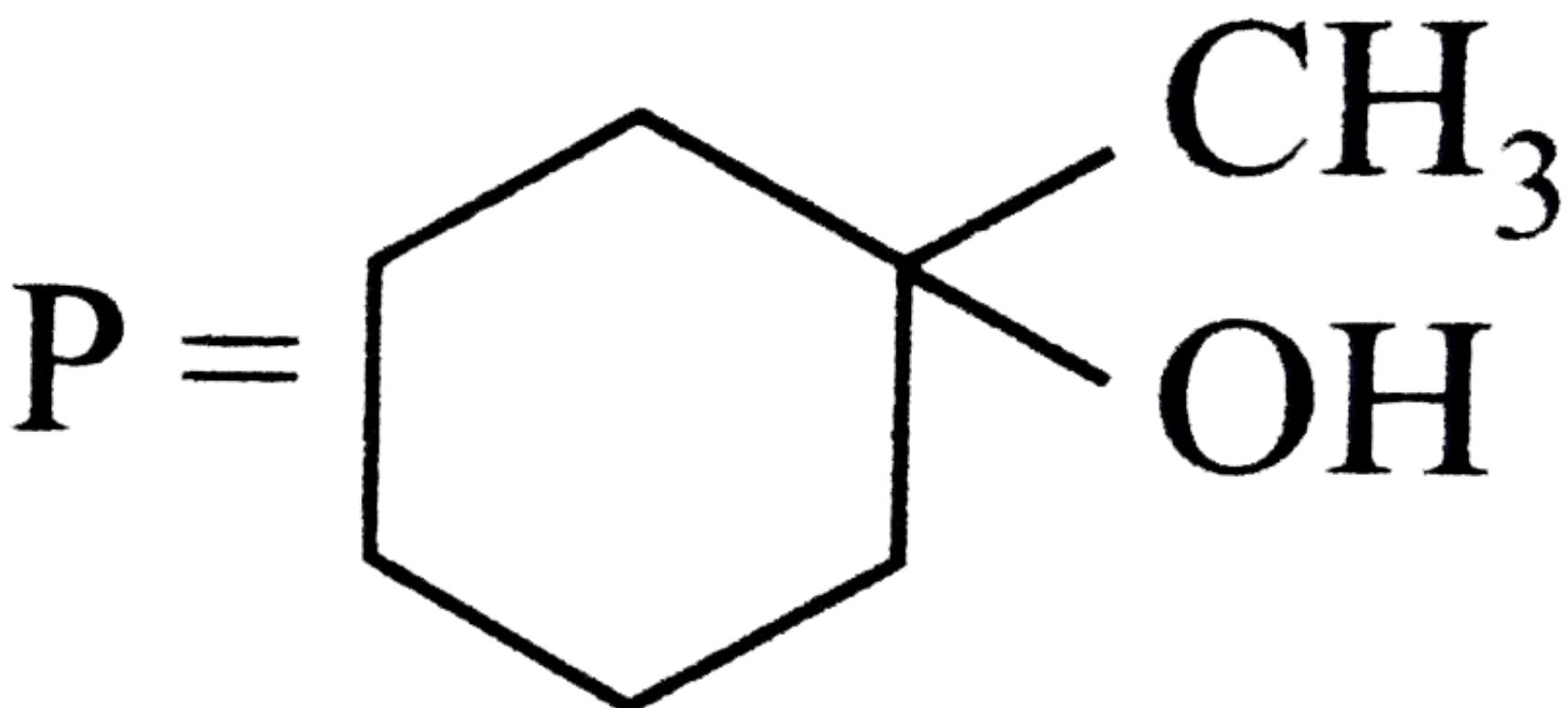
SOLUTION:

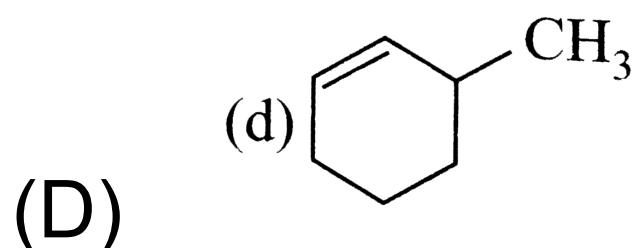
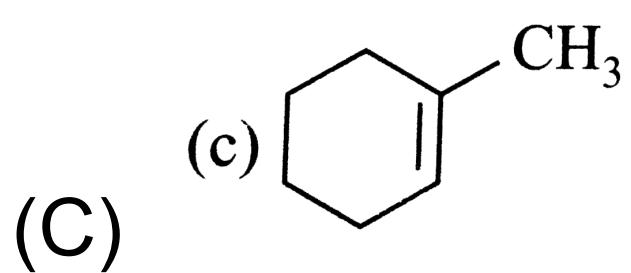
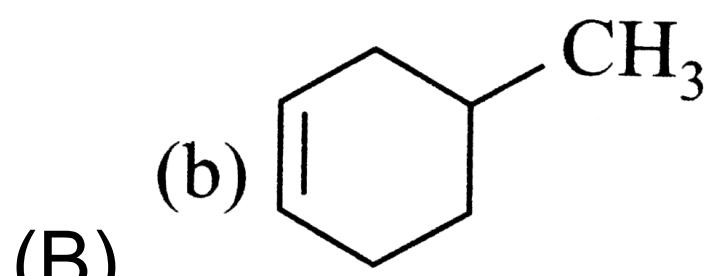
C

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Q-29 - 12676070

Which of the following alkene will give (P) on oxymercuration reduction reaction,





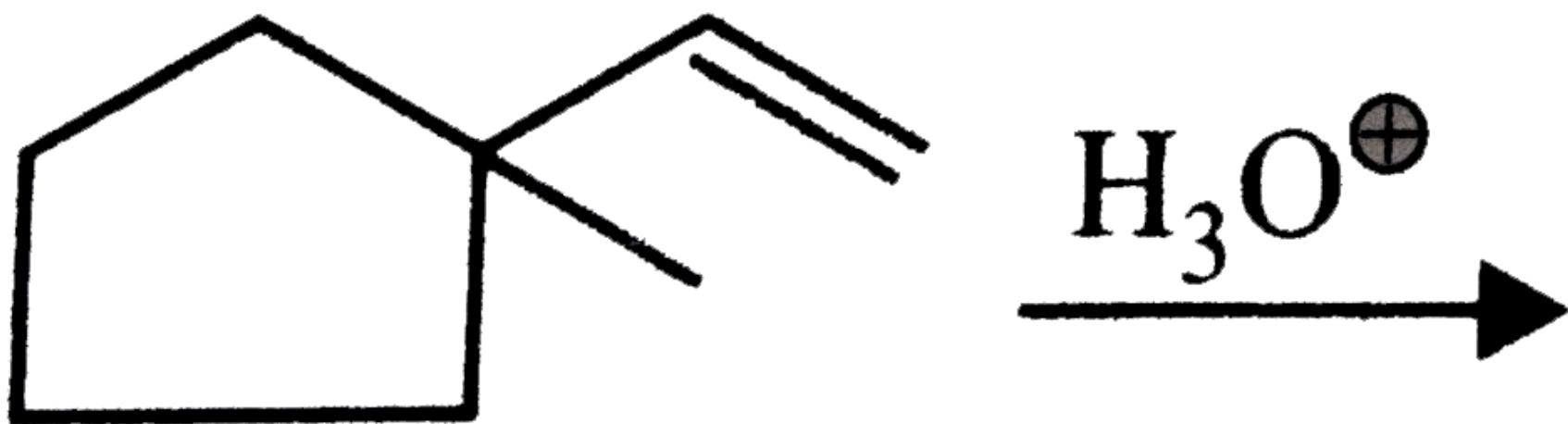
CORRECT ANSWER: C

SOLUTION:

Addition of water by oxymercuration reduction without rearrangement.

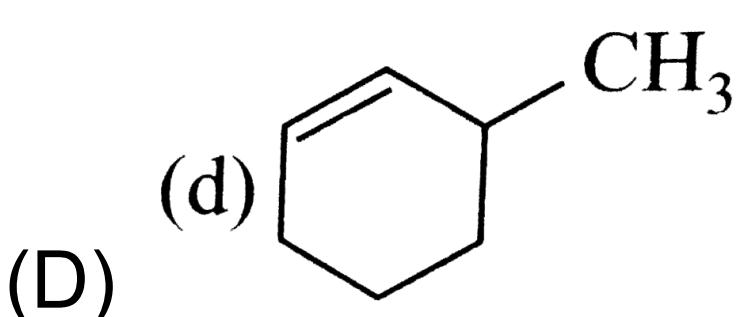
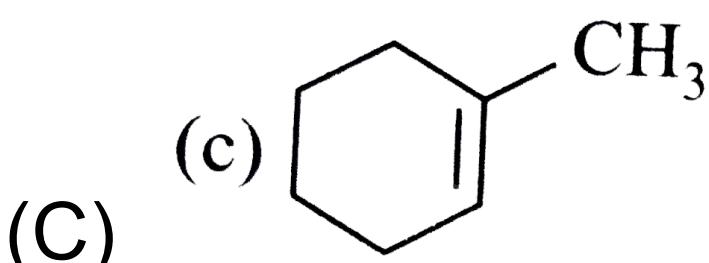
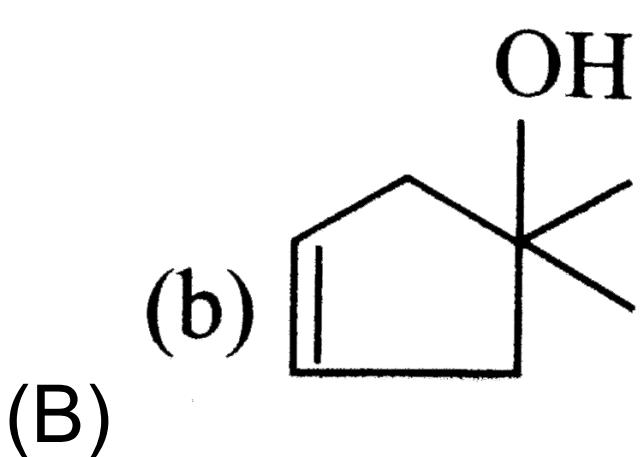
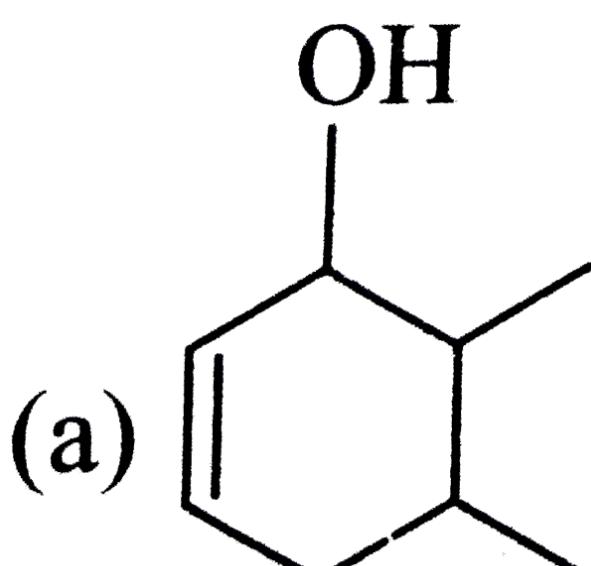
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Q-30 - 12676071



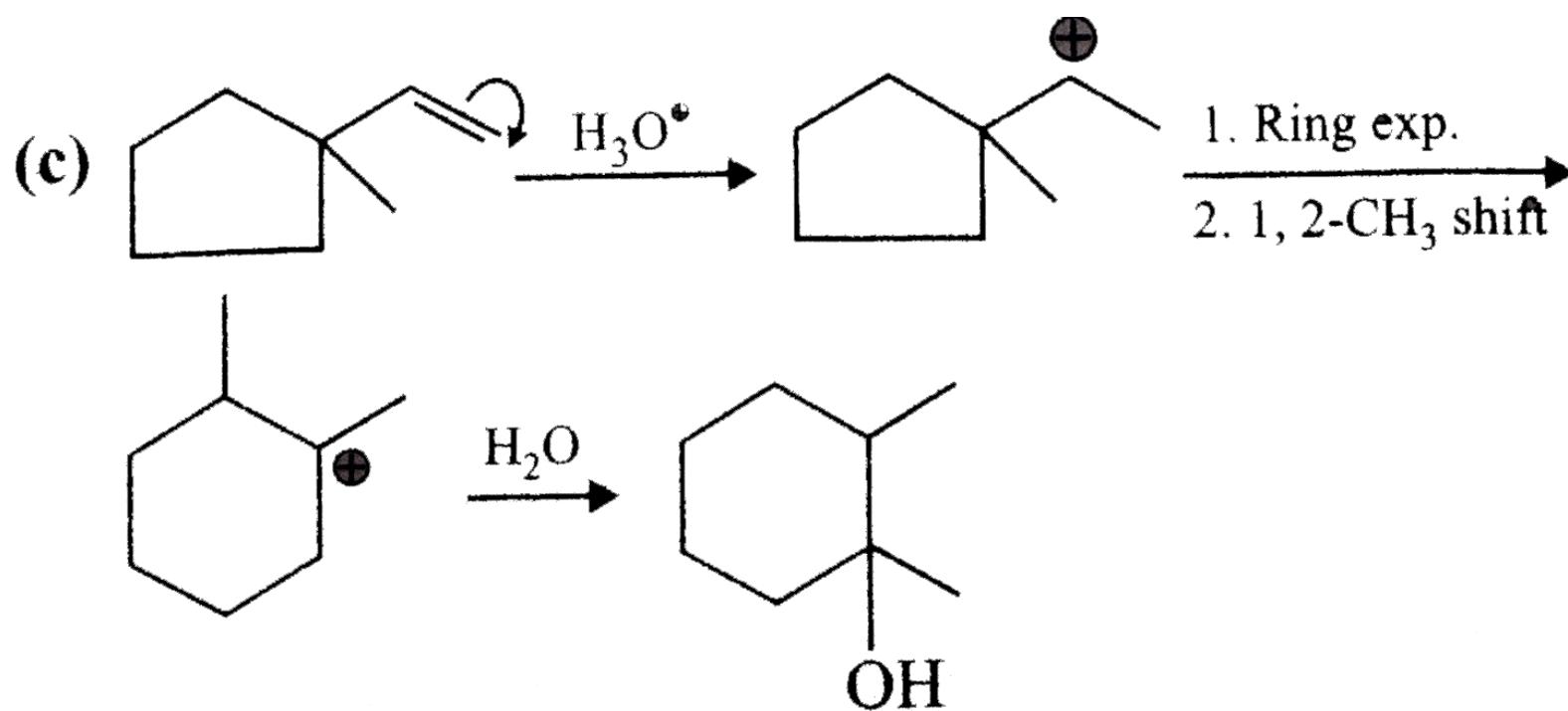
P. Identify

major product 'P' is :



CORRECT ANSWER: C

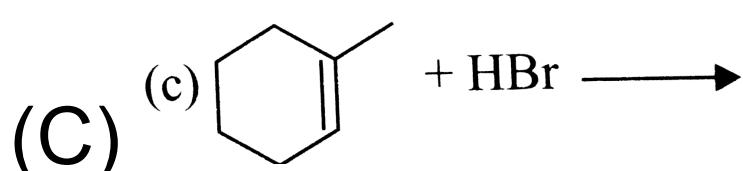
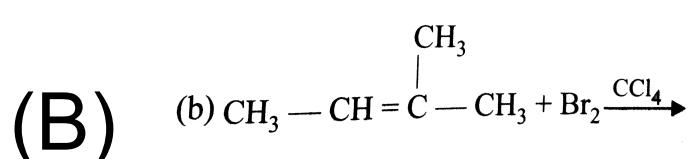
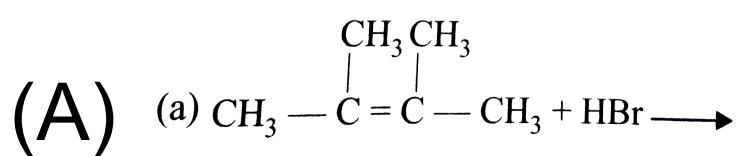
SOLUTION:

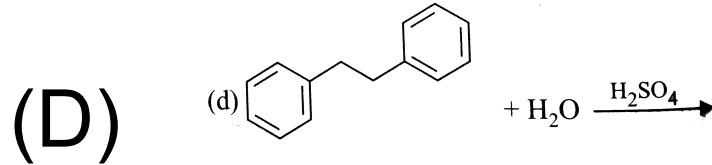


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Q-31 - 12676072

In which of the following reactions Markownikoff's rule of addition reaction is followed

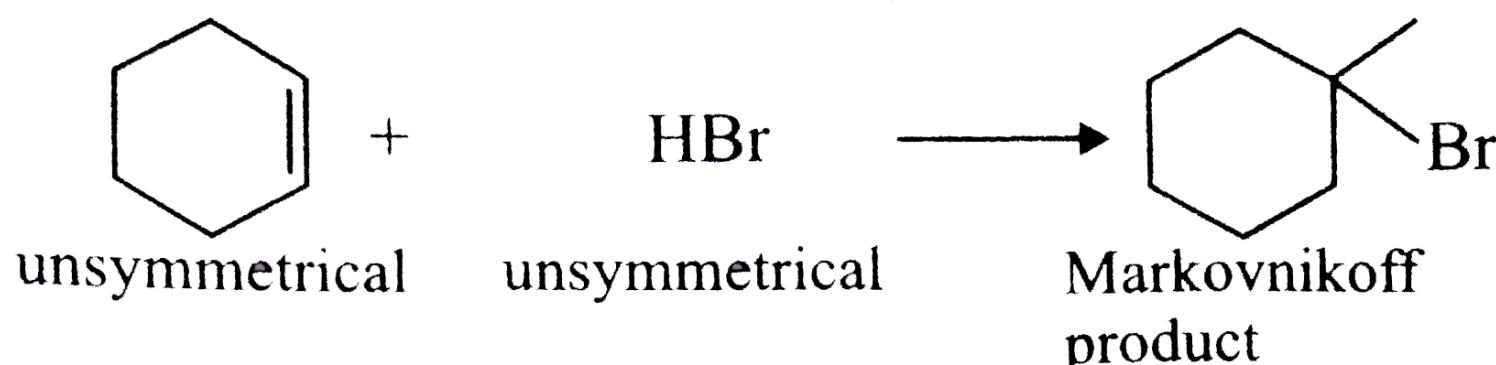




CORRECT ANSWER: C

SOLUTION:

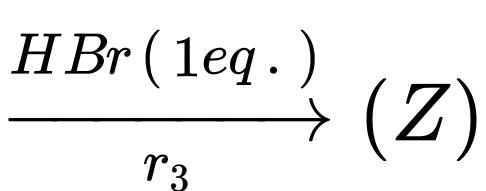
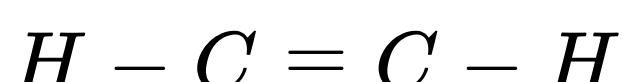
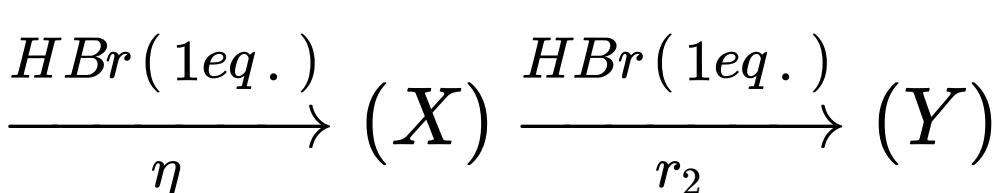
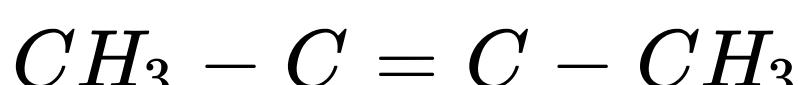
Marownikoff addition is observed for unsymmetrical alkene and unsymmetrical reagent.

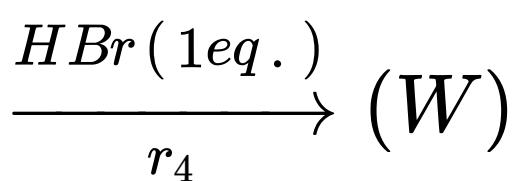
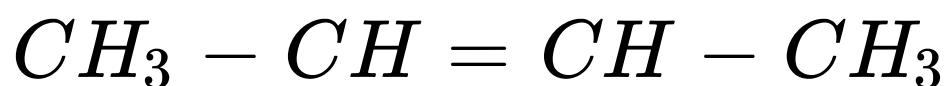


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Q-32 - 12676073

The correct order of rate of following reactions is





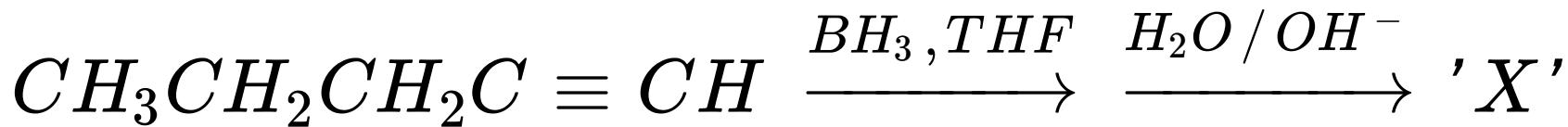
- (A) $r_4 > r_2 > r_1 r_3$
- (B) $r_1 > r_2 > r_3 > r_4$
- (C) $r_4 > r_3 > r_2 > r_1$
- (D) $r_3 > r_4 > r_2 > r_4$
-

CORRECT ANSWER: A

SOLUTION:

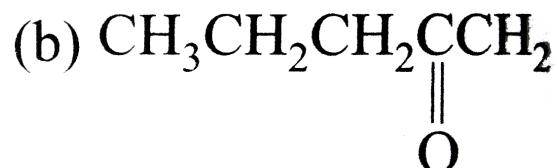
Alkenes are more reactive than alkynes. More branched alkynes are more reactive.

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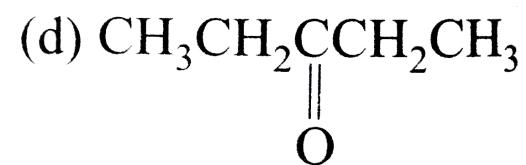


Identify the product ' X ':

(A)



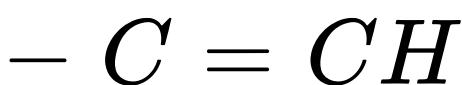
(B)



(D)

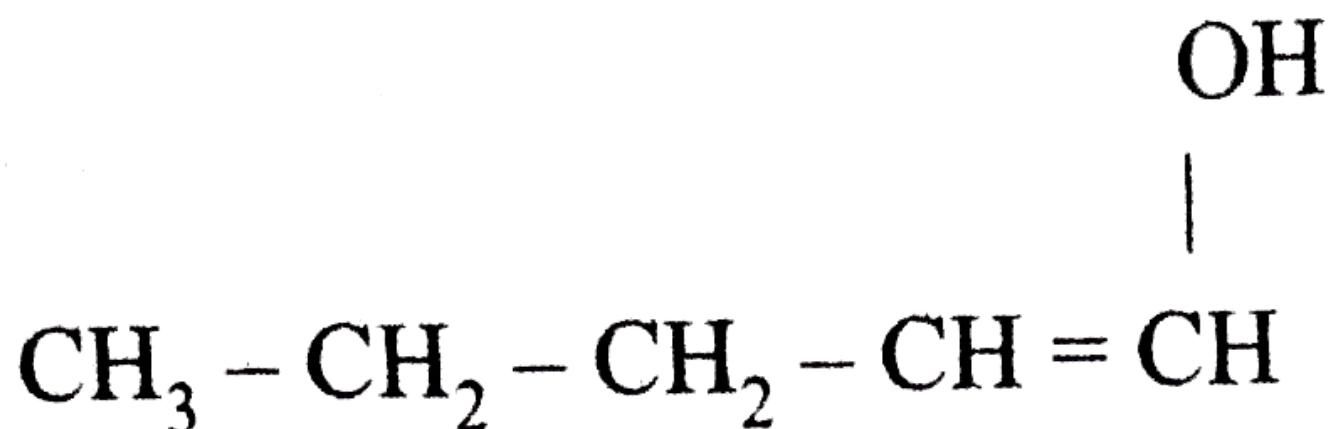
CORRECT ANSWER: A

SOLUTION:



(1) $BH_3 - THF$

$\xrightarrow{(2) H_2O_2 / OH^-}$

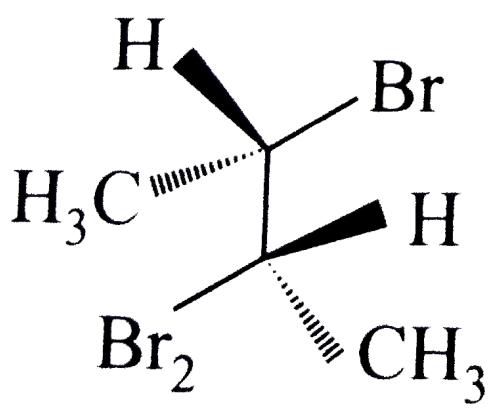
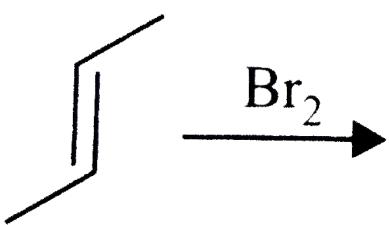


\Downarrow Tautomerisation

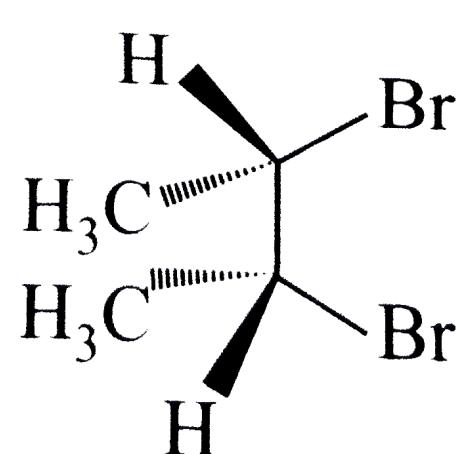


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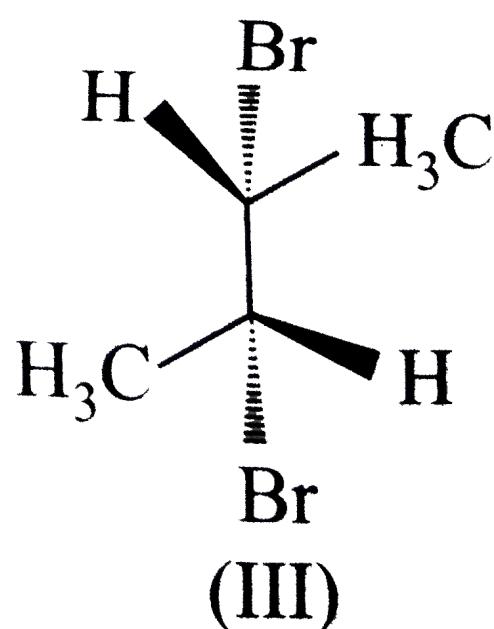
Q-34 - 12676077



(I)



(II)



(III)

(A) I and III

(B) II and III

(C) *I* only

(D) *II* only

CORRECT ANSWER: D

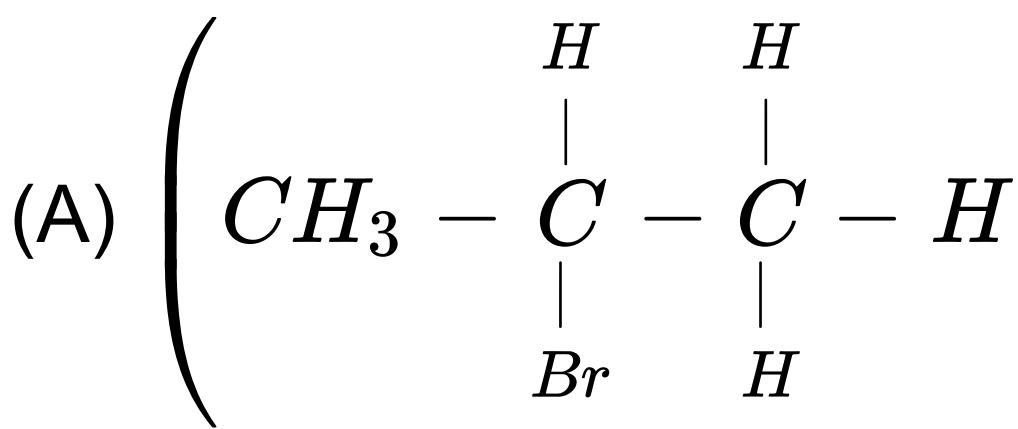
SOLUTION:

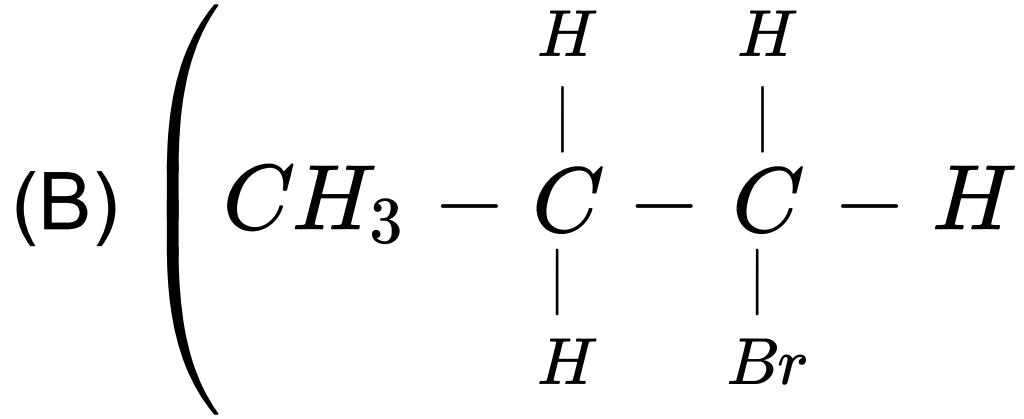
d

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Q-35 - 12676079

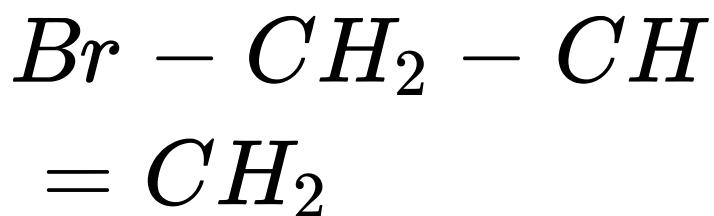
What would be the main product when propene reacts with *HBr* in presence of benzoyl peroxide ?





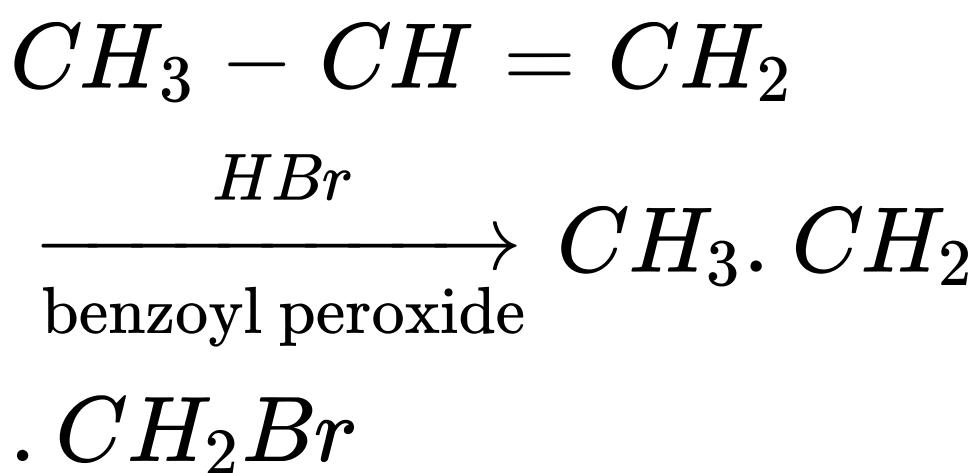
(C) Both (a) and (b)

(D)



CORRECT ANSWER: B

SOLUTION:



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Q-36 - 12676083

Propene reacts with Cl_2 at $500C$ the products is formed

(A) 1 – chloro propene – 1

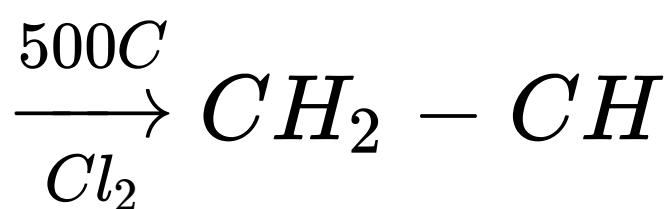
(B) 2 – chloro propene – 1

(C) 1, 2 – dichloro propane

(D) 3 – chloro propene – 1

CORRECT ANSWER: D

SOLUTION:



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Q-37 - 12676084

Anti – Markovnikoff's addition of HBr is not observed in

(A) Propene

(B) But-2-ene

(C) Butene

(D) pent-2-ene

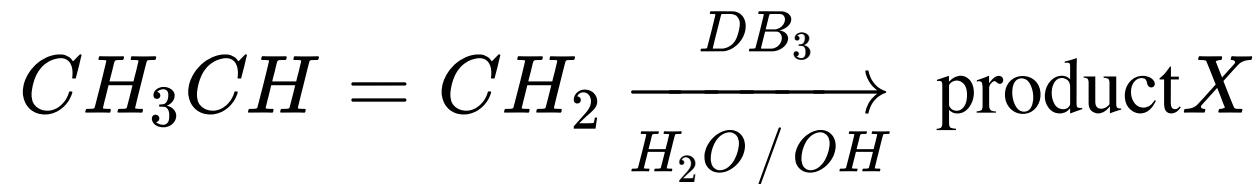
CORRECT ANSWER: B

SOLUTION:

= Anti - Markownikoff's and Markownikoff's both are not applicable in symmetrical alkene.

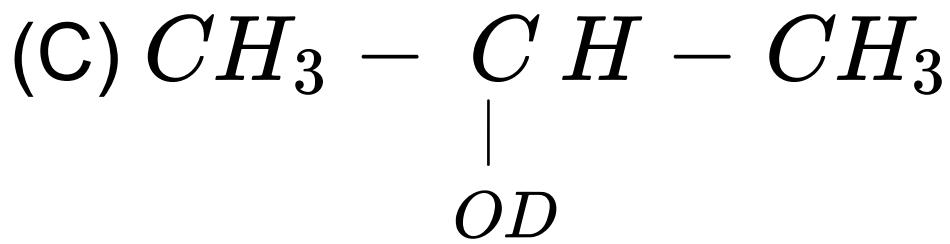
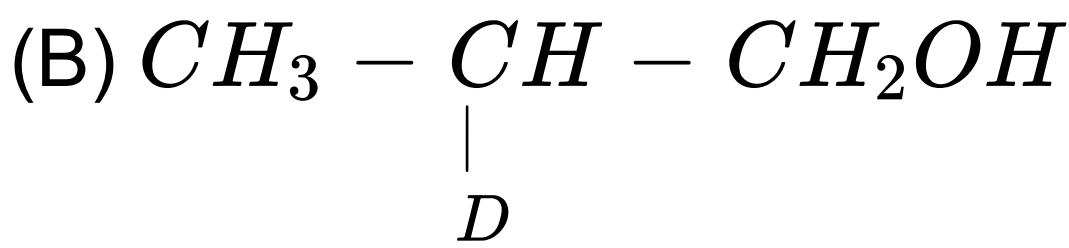
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Q-38 - 12676087



X is

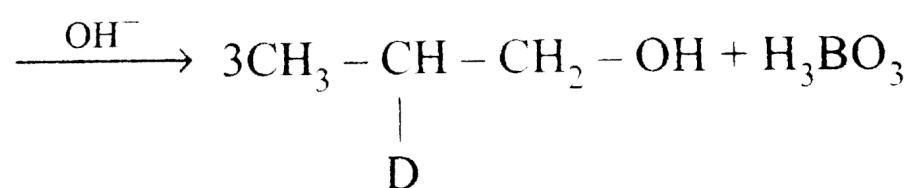
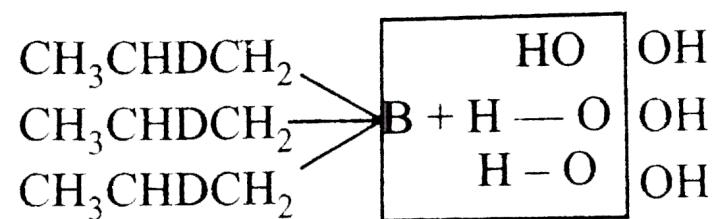
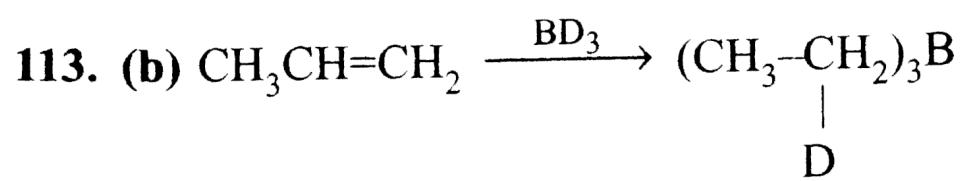
(A) $CH_3 - \underset{OH}{\underset{|}{C}} H - CH_2D$



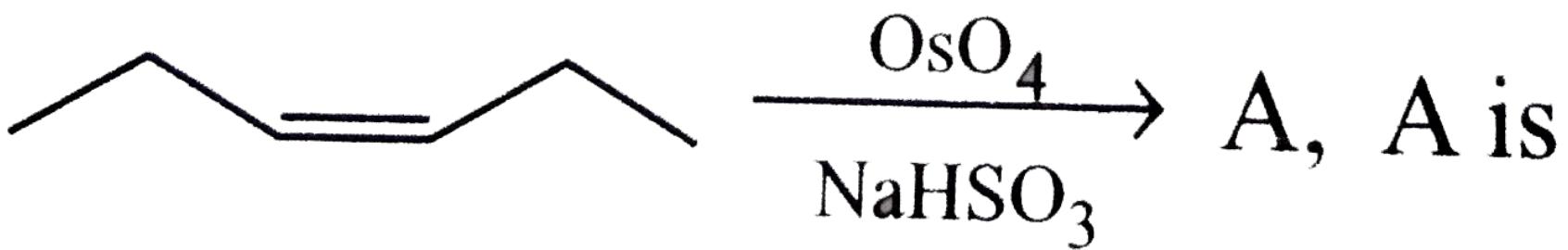
(D) None of these

CORRECT ANSWER: B

SOLUTION:



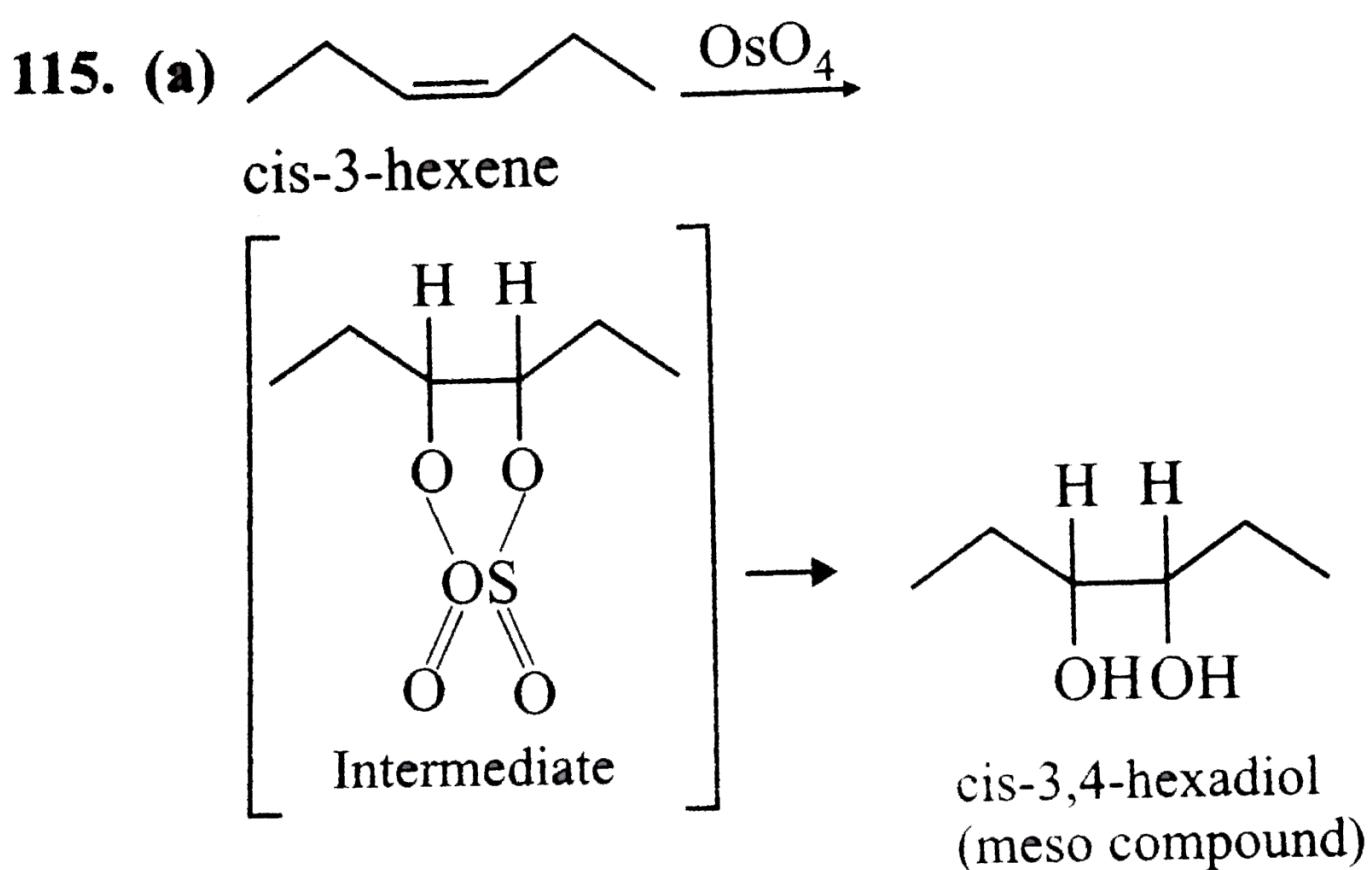
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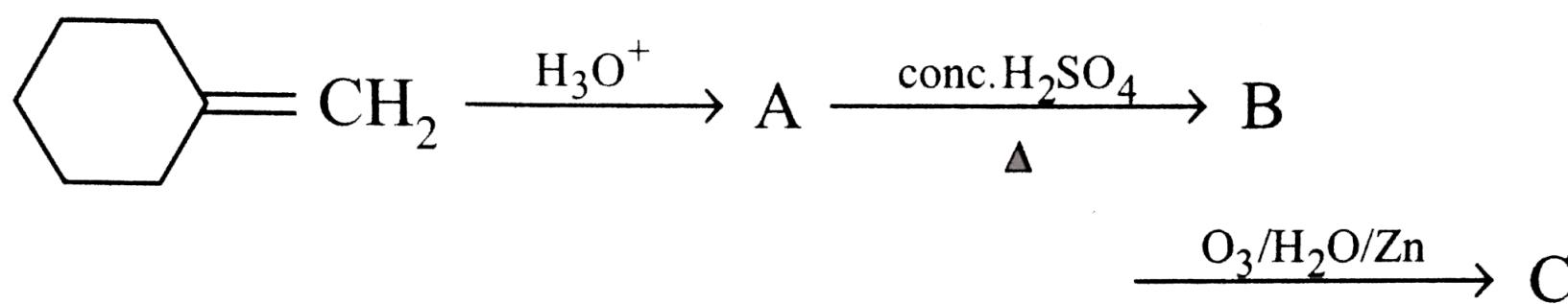
- (A) meso diol
(B) racemic diol
(C) both are correct
(D) none of these

CORRECT ANSWER: A

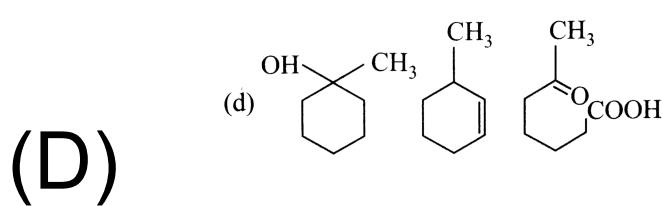
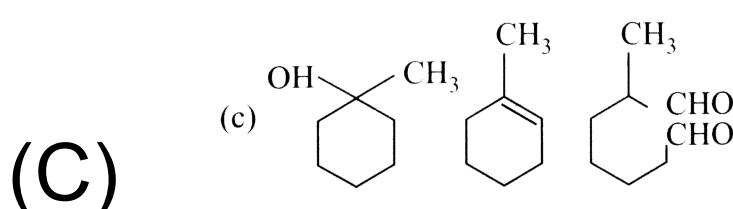
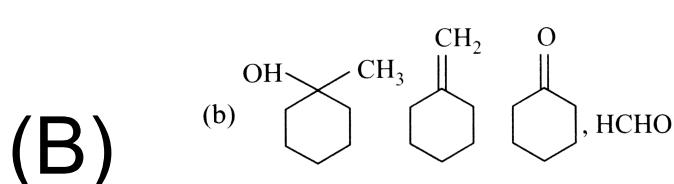
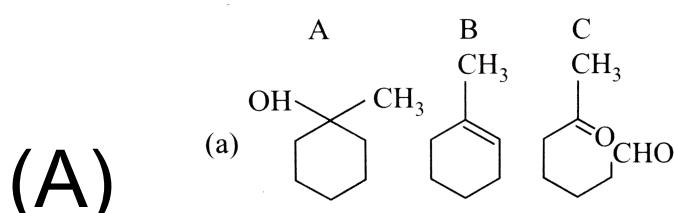
SOLUTION:



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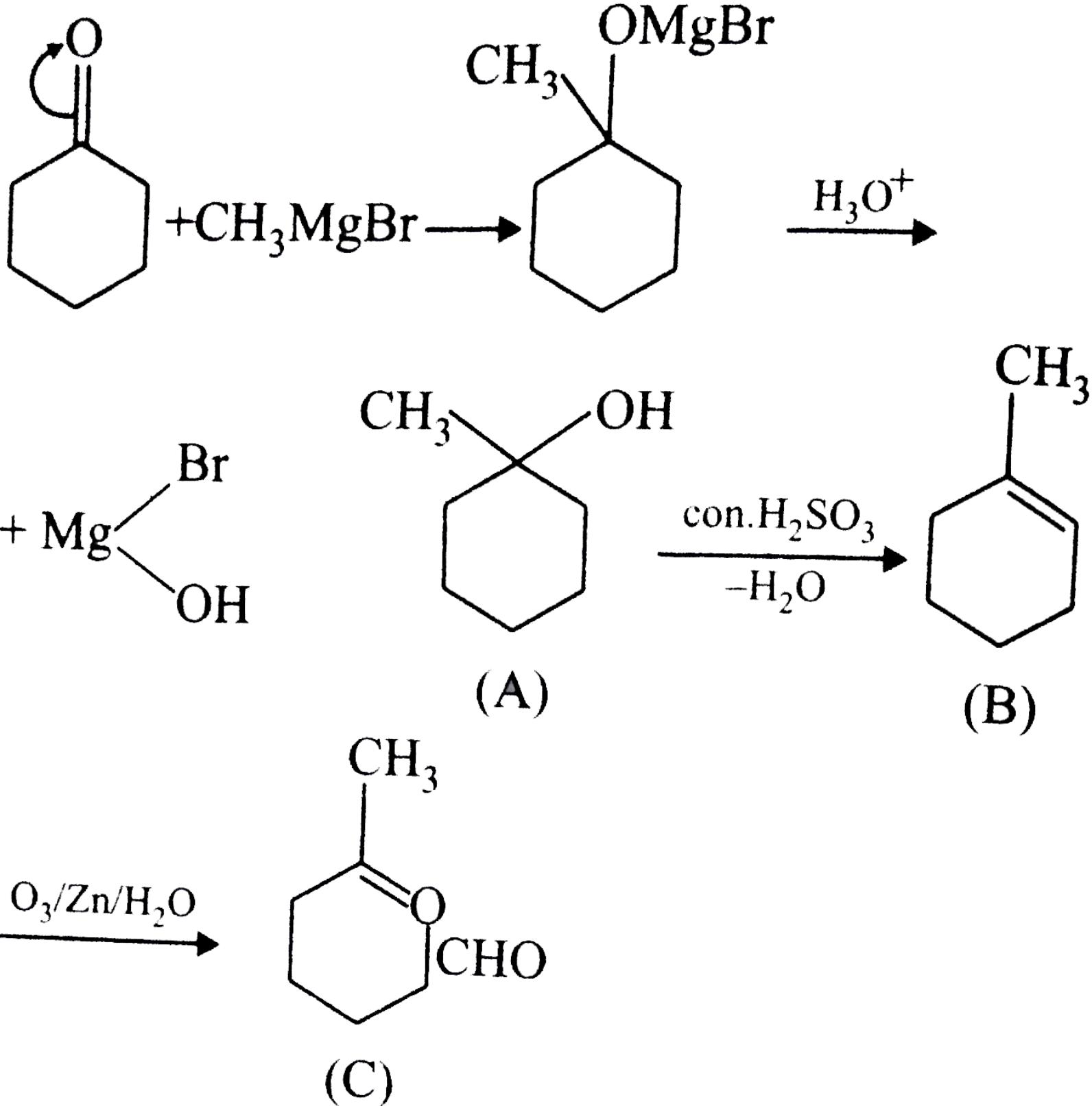


A, B and C are



CORRECT ANSWER: A

SOLUTION:



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Q-41 - 12676095

Dehydration of 2, 2, 3, 4, 4 – pentamethy 1 – 3 – pentanol gave two alkenes *A* and *B*. The ozonolysis product of *A* and *B* are

(a) *A* gives $(\text{CH}_3)_3\text{C}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{C}(\text{CH}_3)_3$ and HCHO

B gives $\text{CH}_3-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{CH}_2-\text{C}(\text{CH}_3)_3$ and HCHO

(A)

(b) A gives $(\text{CH}_3)_3\overset{\text{O}}{\underset{\text{O}}{\text{C}}}(\text{C}\text{H}_3)_3$ and HCHO
 B gives $\text{CH}_3 - \overset{\text{O}}{\underset{\text{O}}{\text{C}}}(\text{C}\text{H}_3)_3$ and HCHO

(B)

(c) A gives $(\text{CH}_3)_3\overset{\text{O}}{\underset{\text{C}}{\text{C}}}(\text{CH}_2\text{CH}_3)_2$ and HCHO
 A gives $(\text{CH}_3)_3\text{CH}_2 - \overset{\text{O}}{\underset{\text{C}}{\text{C}}}(\text{CH}_3)_3$ and $\text{CH}_3\text{CH}_2\text{CHO}$

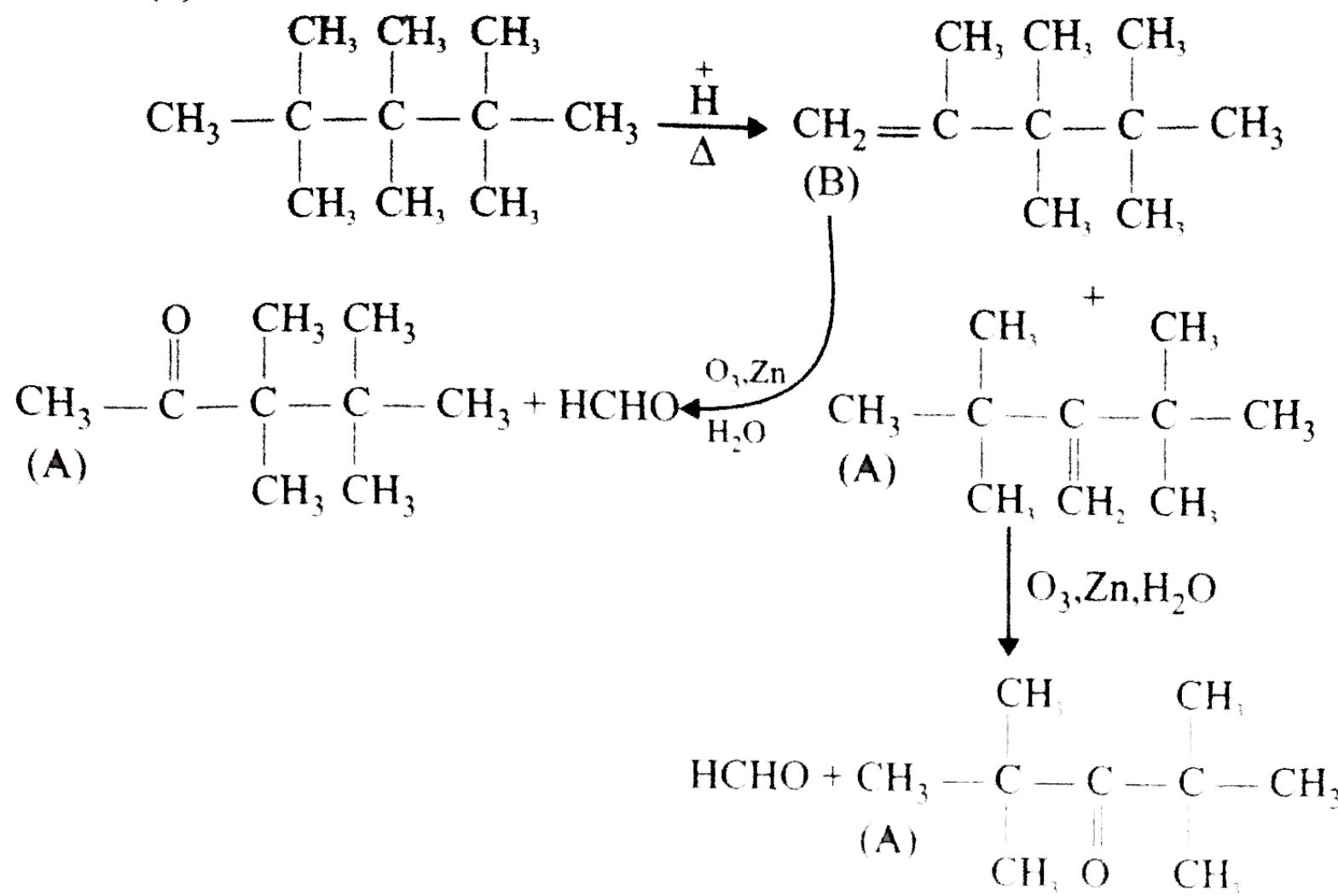
(C)

(D) None of these

CORRECT ANSWER: A

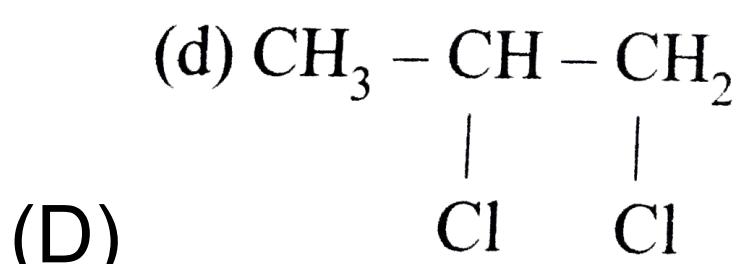
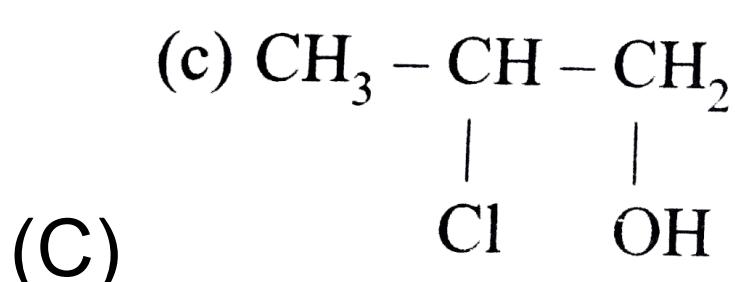
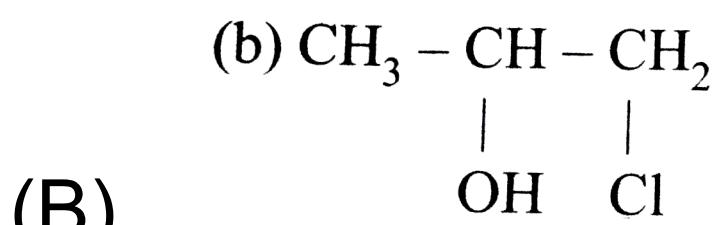
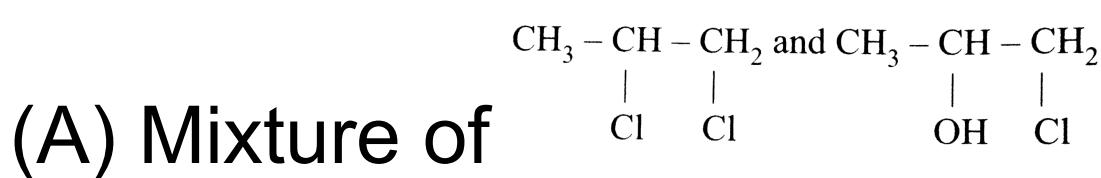
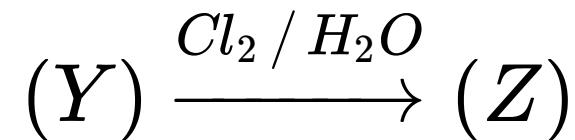
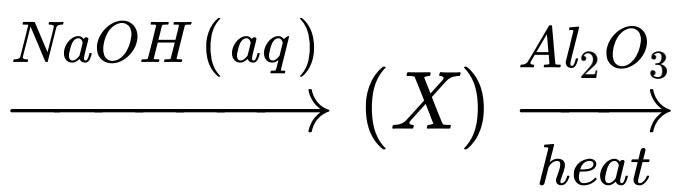
SOLUTION:

119. (a)



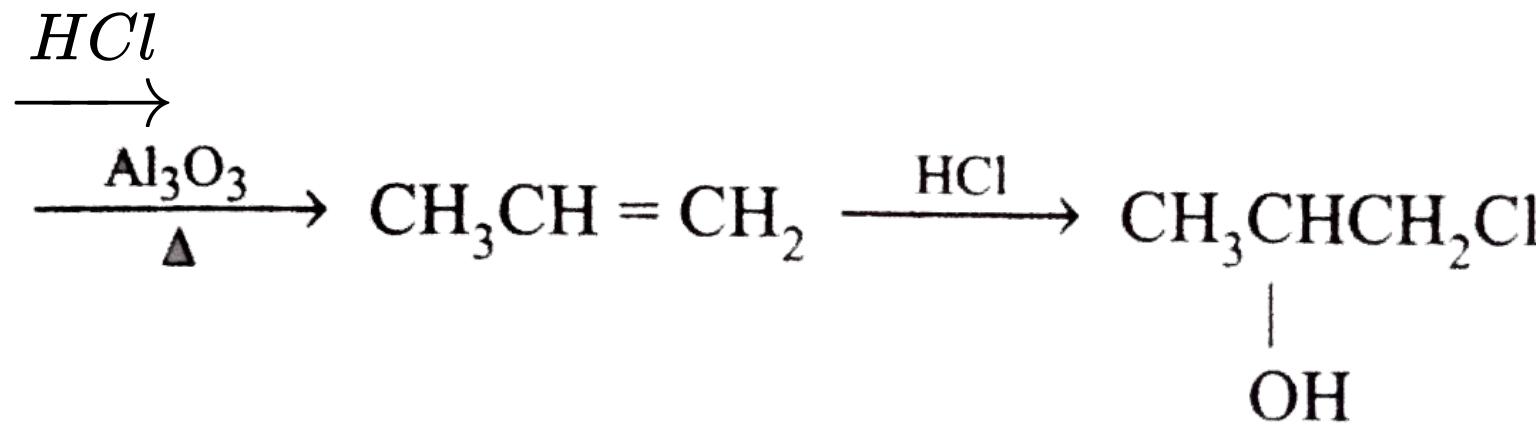
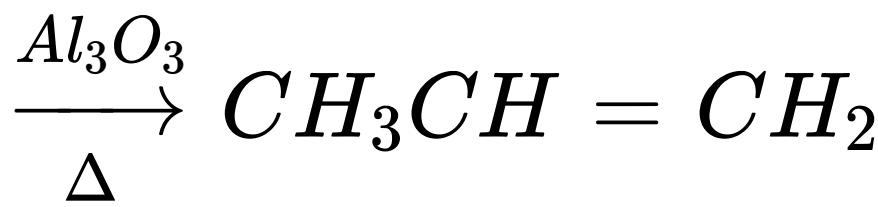
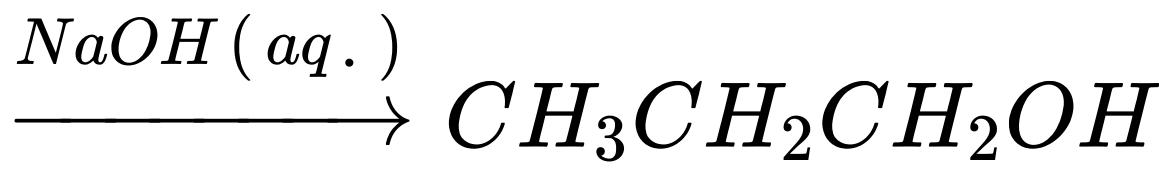
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Identify 'Z' in the following reaction series,



CORRECT ANSWER: B

SOLUTION:

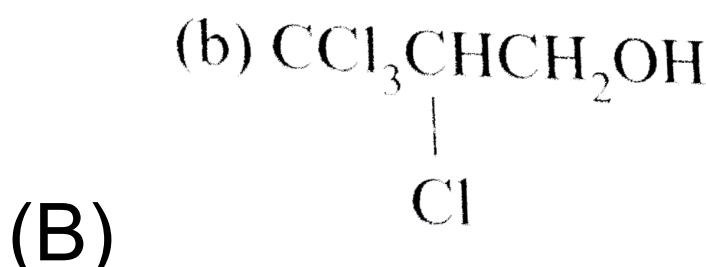
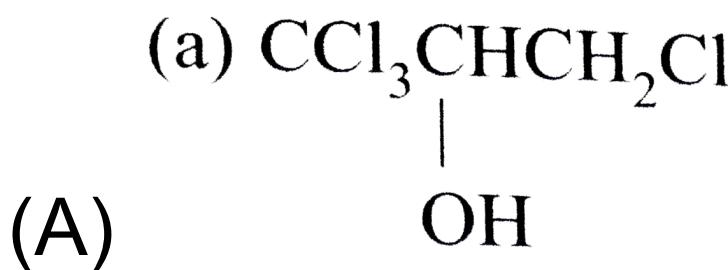


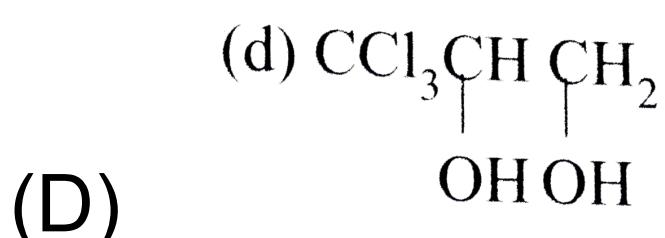
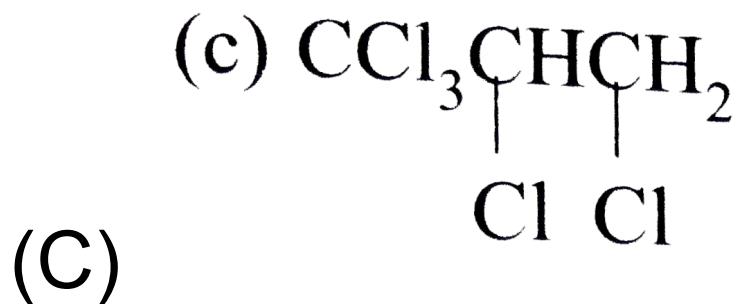
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Q-43 - 12676118



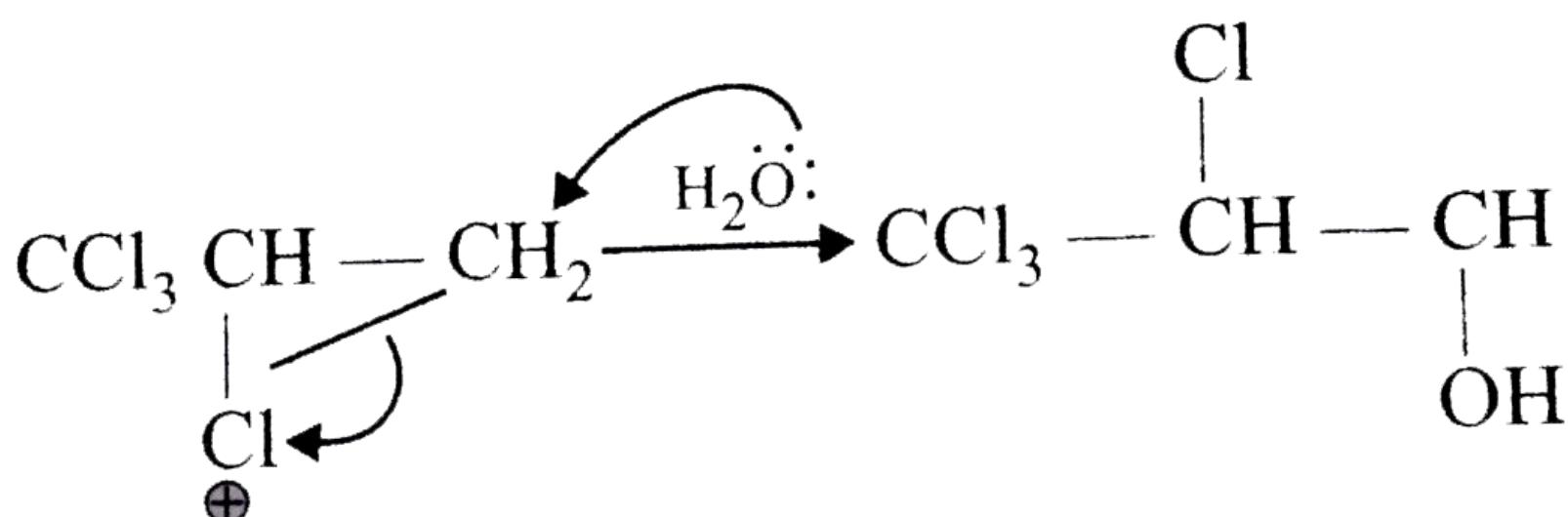
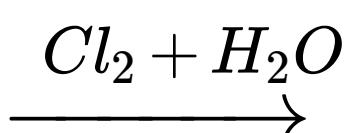
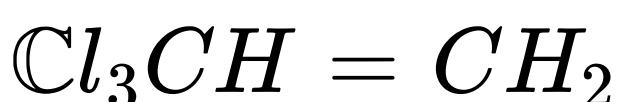
Identify major product P .





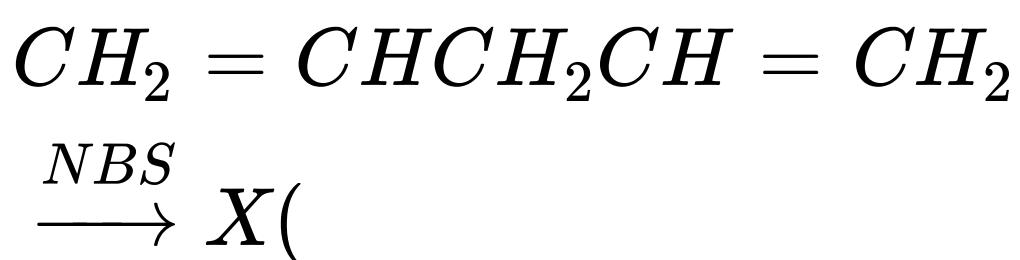
CORRECT ANSWER: B

SOLUTION:

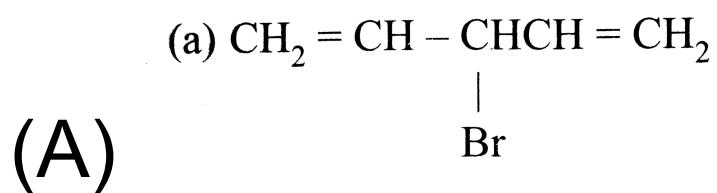


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Q-44 - 12676119



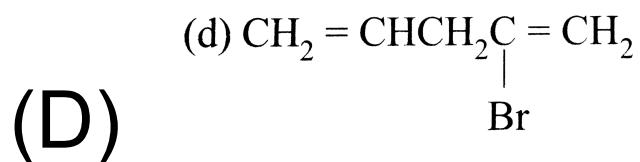
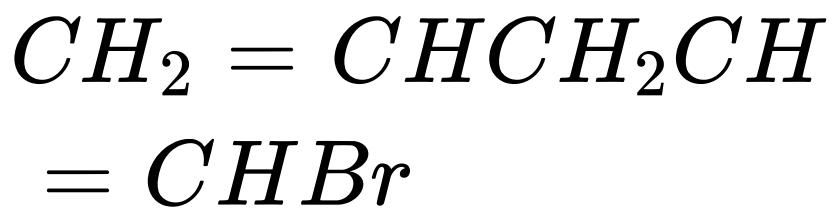
Major), (X) is :



(B)

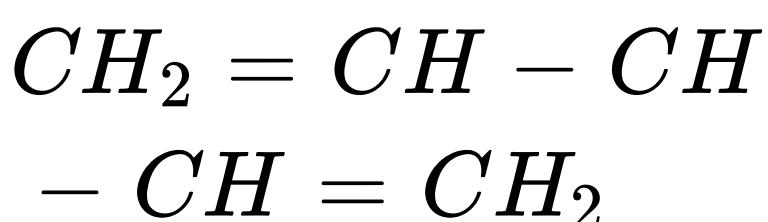
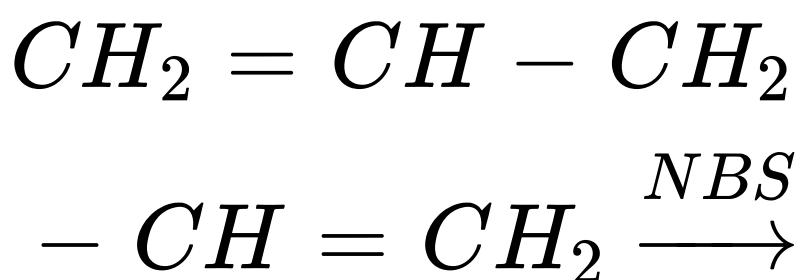


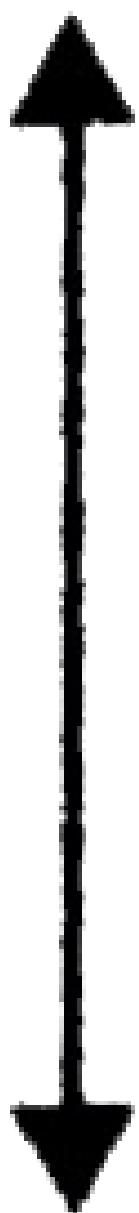
(C)



CORRECT ANSWER: B

SOLUTION:





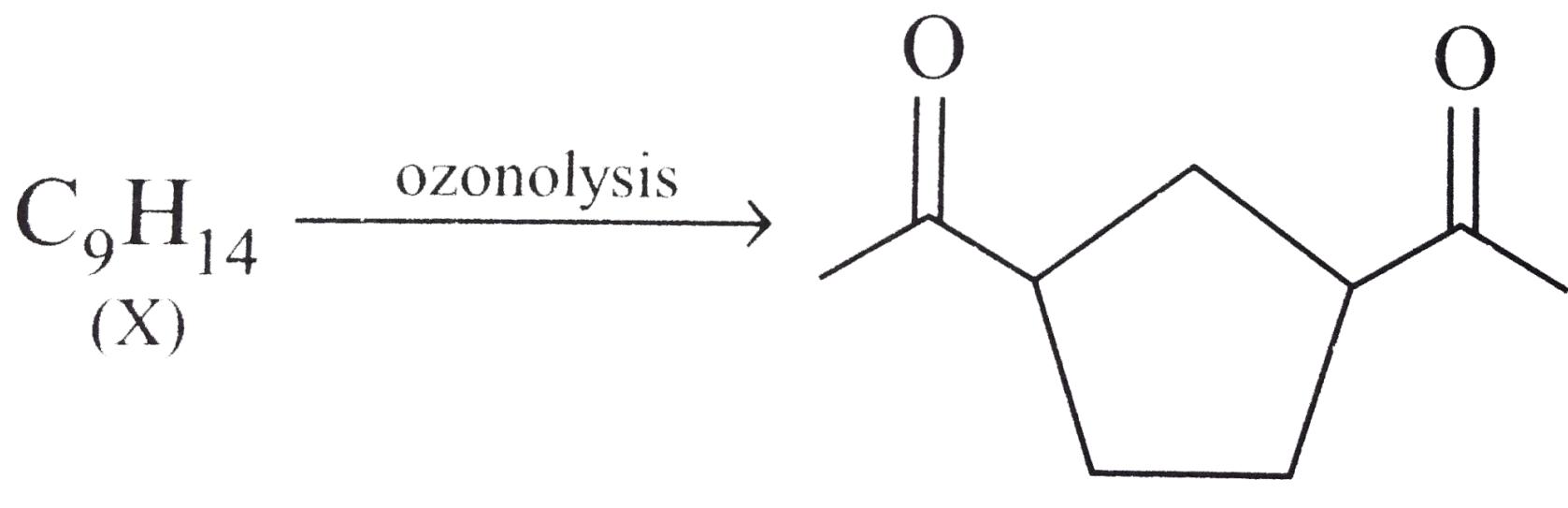
Resonance

$$\begin{aligned}CH_2 &= CH - CH \\&= CH - CH_2 - Br\end{aligned}$$

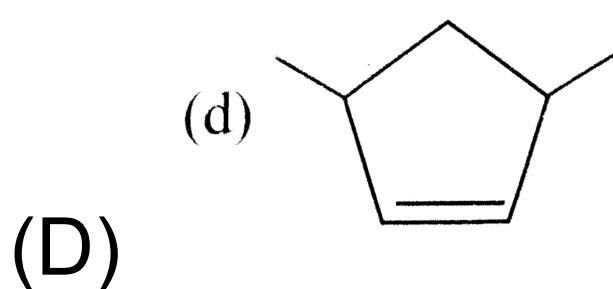
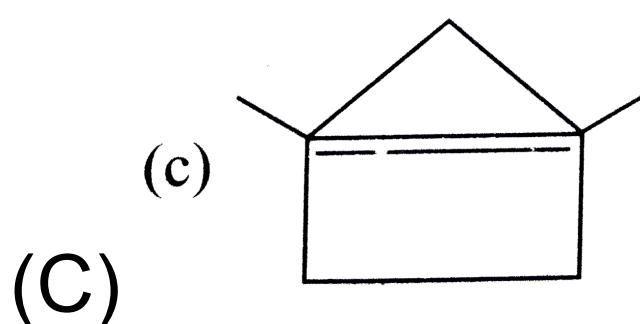
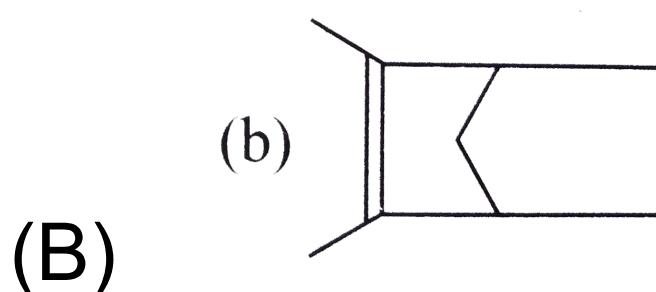
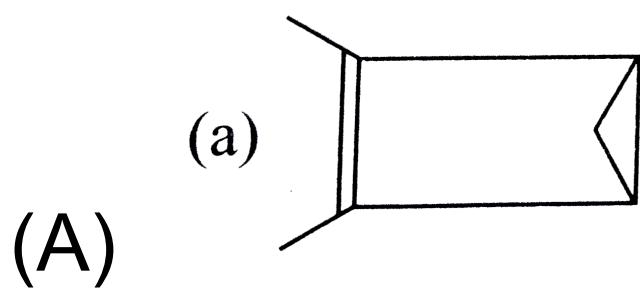
\xrightarrow{NBS}



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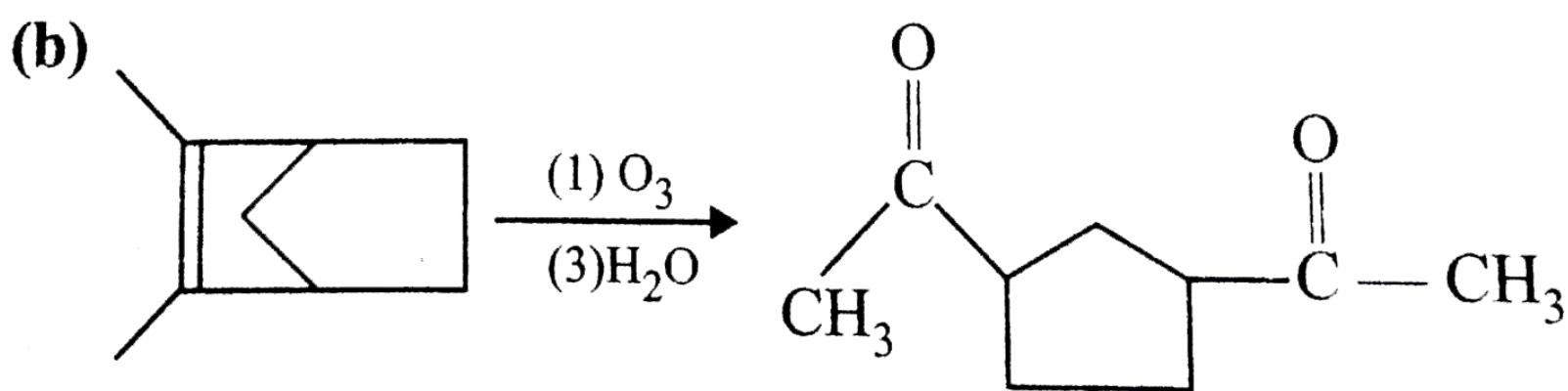


Hence X is



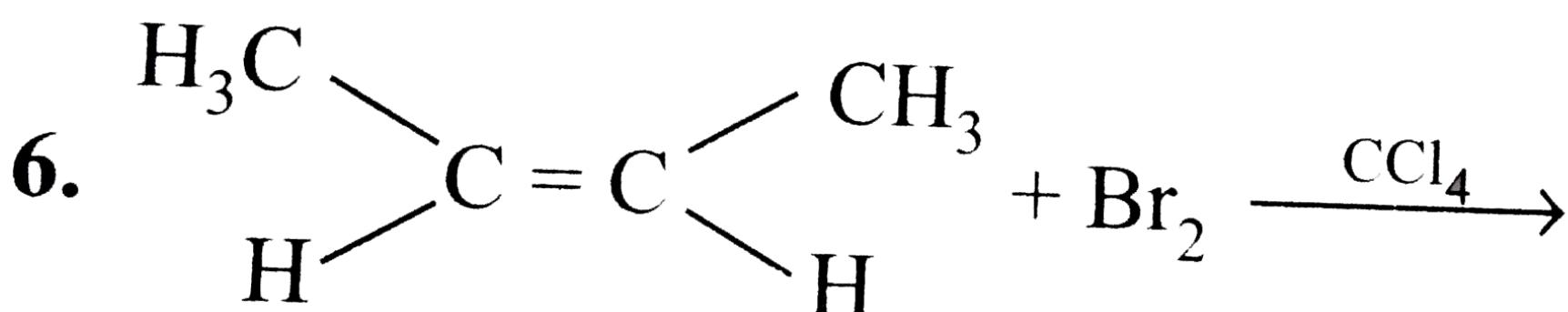
CORRECT ANSWER: B

SOLUTION:

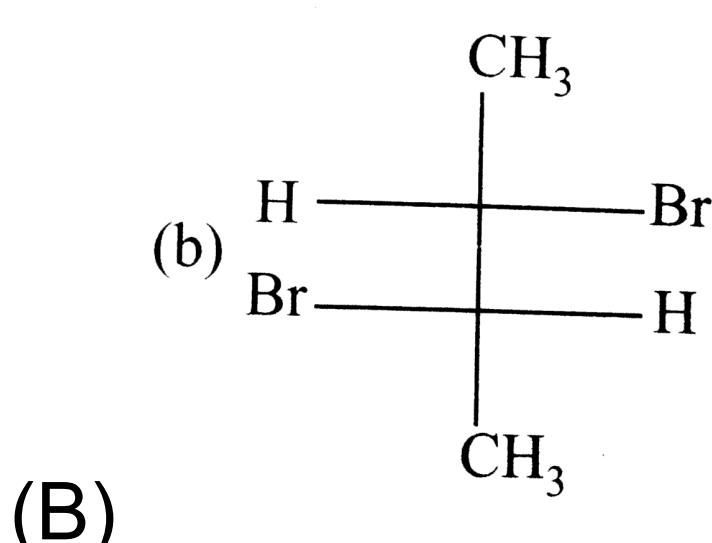
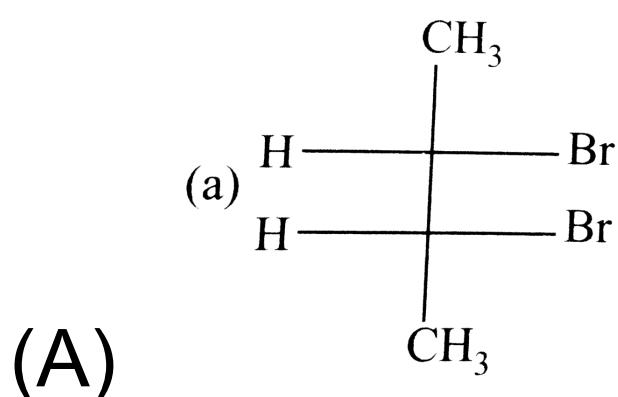


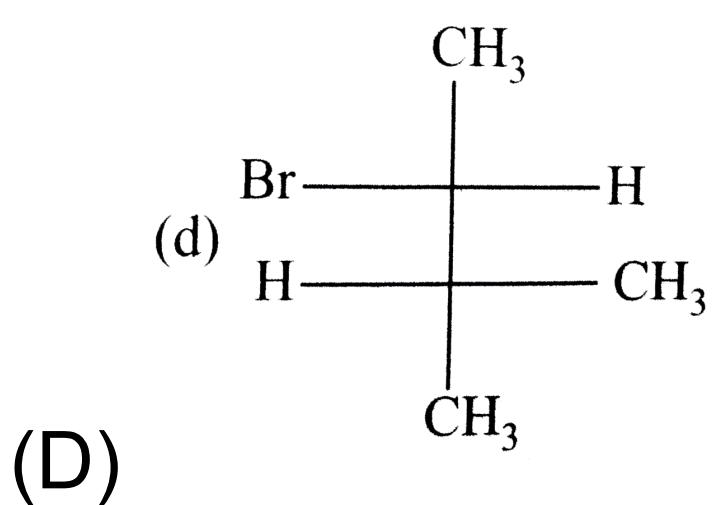
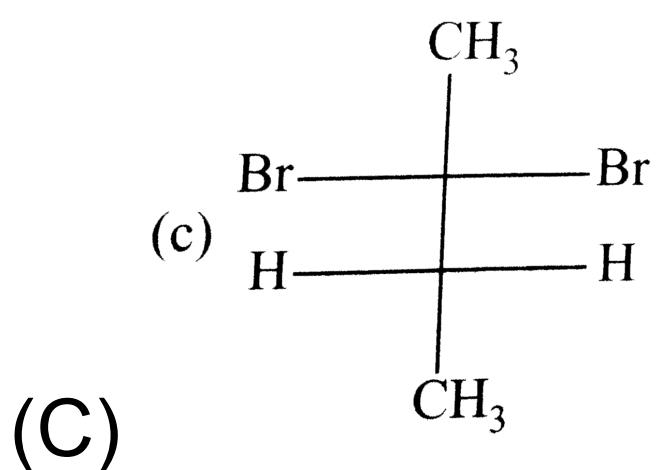
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Q-46 - 12676126



Product is :





CORRECT ANSWER: B

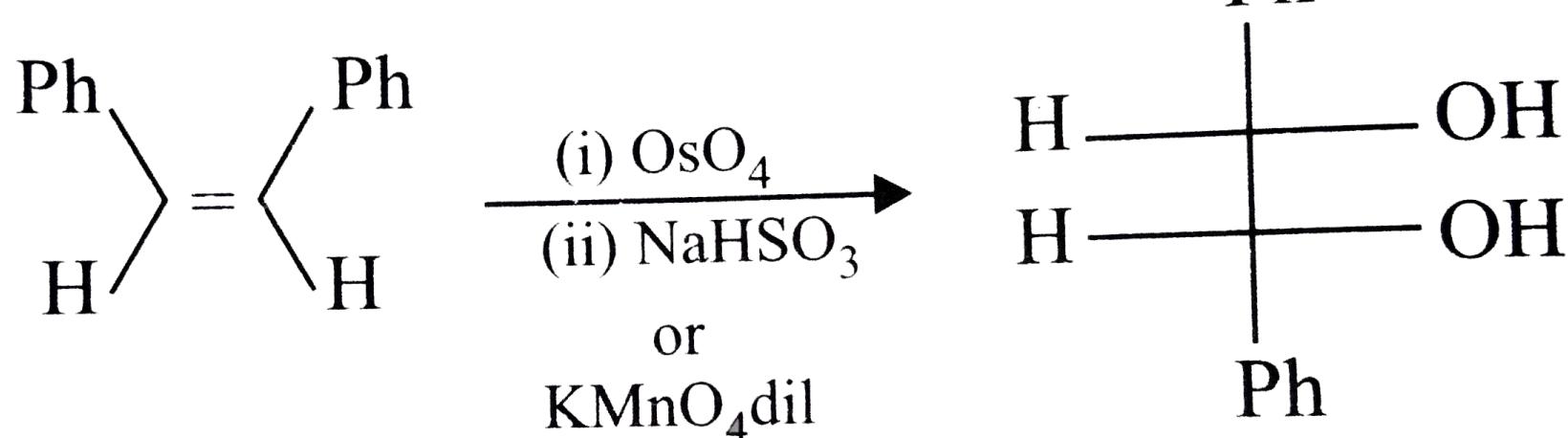
SOLUTION:

In anti addition, cis reactant will give enantiomers.

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Q-47 - 12676128

The given reaction,



is an example of :

- (A) Stereospecific reaction
 - (B) Stereo selective reaction
 - (C) (a) and (b) Both
 - (D) Ordinary reaction
-

CORRECT ANSWER: C

SOLUTION:

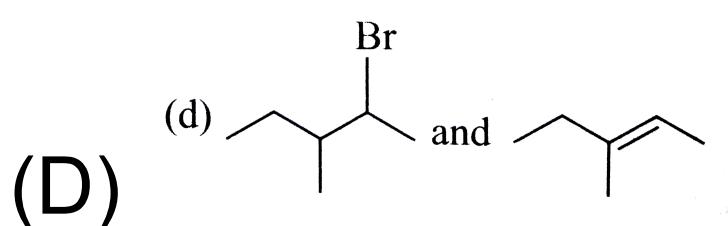
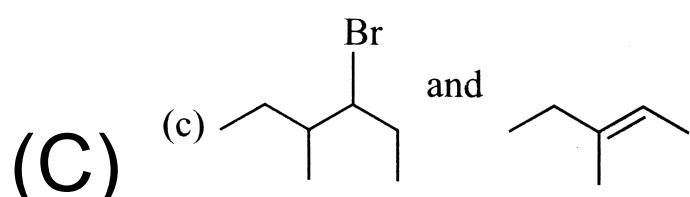
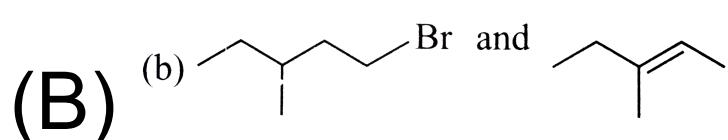
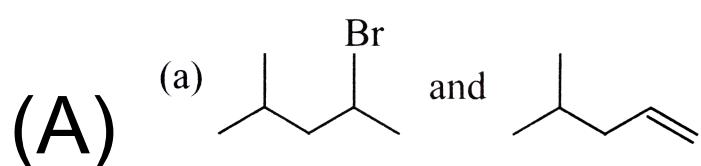
Since cis form in syn addition gives only one stereoisomer, *i. e.* meso. Therefore, it is 100 percent stereoselective and 100 percent stereoselective reaction

is also called stereospecific reaction.

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Q-48 - 12676131

An organic compound $X(C_6H_{13}Br)$ is optically active, X on treatment with $(CH_3)_3COK$ in $(CH_3)_3COH$ gives $Y(C_6H_{12})$, a major product. Y on treatment with $Br_2 - CCl_4$ in the presence of $FeBr_3$ gives a dibromide which on further treatment with $NaNH_2$ gives C_6H_{10} which is still optically active. Hence, X and Y respectively are

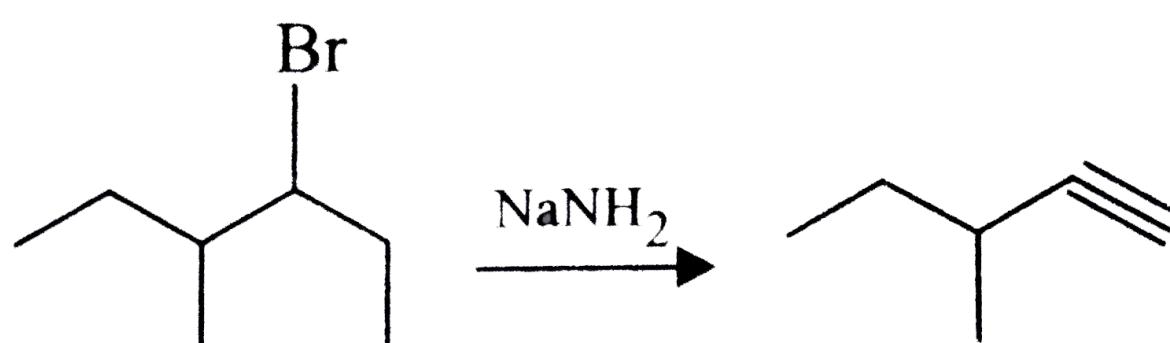


CORRECT ANSWER: D

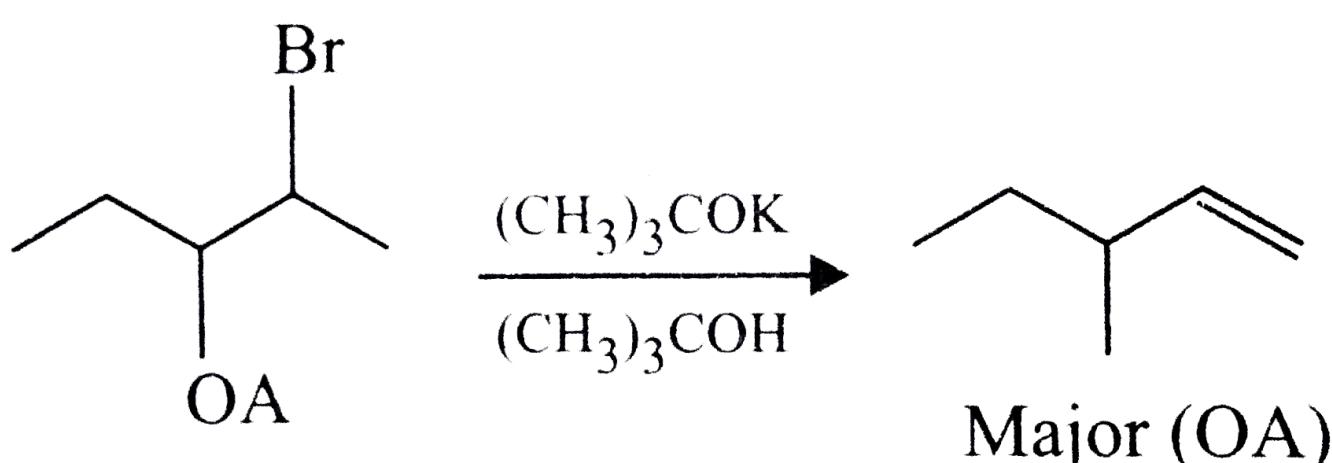
SOLUTION:

The last product formed after dehydrobromination

($-HBr$) is an alkyne. The only six carbon, optically active alkyne is



Hence, Y must be 3-methyl-1-pentene.



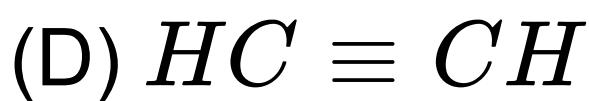
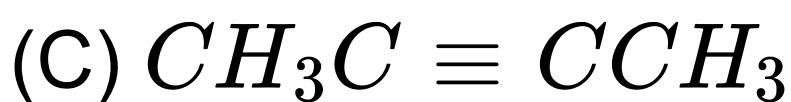
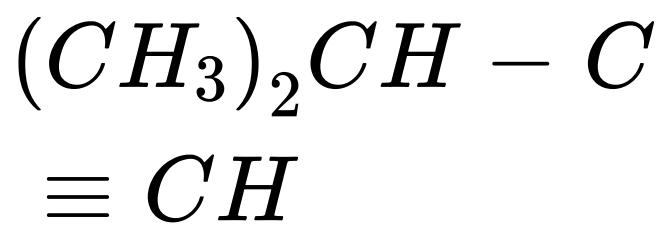
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Q-49 - 12676135

Which of the following will not react with an ammoniacal silver nitrate solution ?

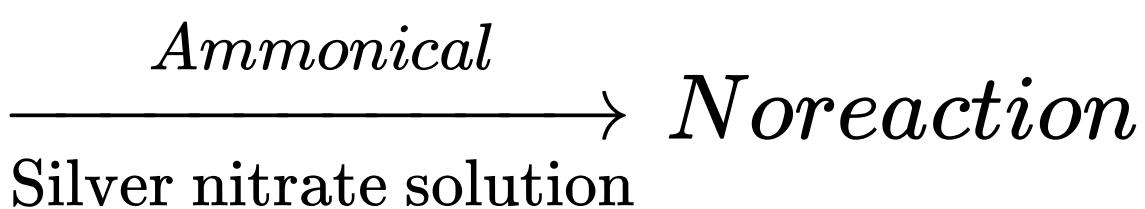
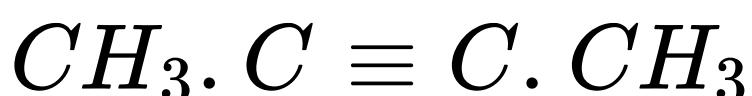


(B)



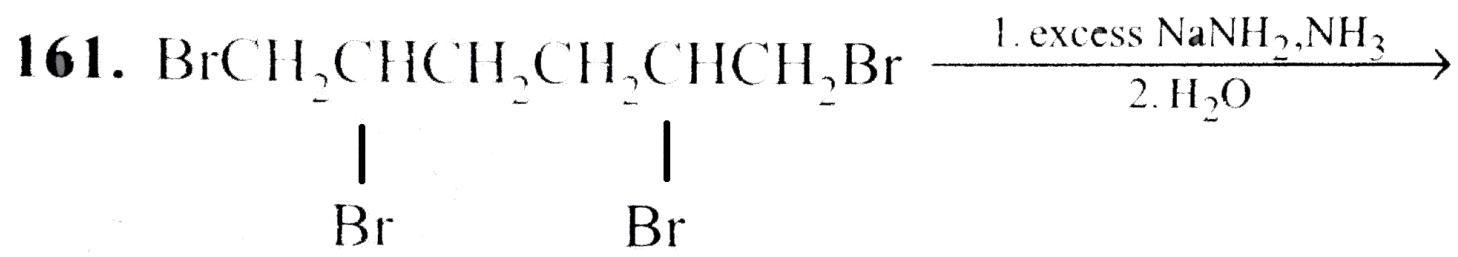
CORRECT ANSWER: C

SOLUTION:



Because there is no acidic hydrogen.

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(A)

$$\begin{aligned} H - C &= C - CH_2 \\ - CH_2 - C &\equiv C - H \end{aligned}$$

(B)

$$\begin{aligned} H - C &\equiv C - C \equiv C \\ - H \end{aligned}$$

(C)

$$\begin{aligned} H - C &\equiv C - CH_2 \\ - C &\equiv C - H \end{aligned}$$

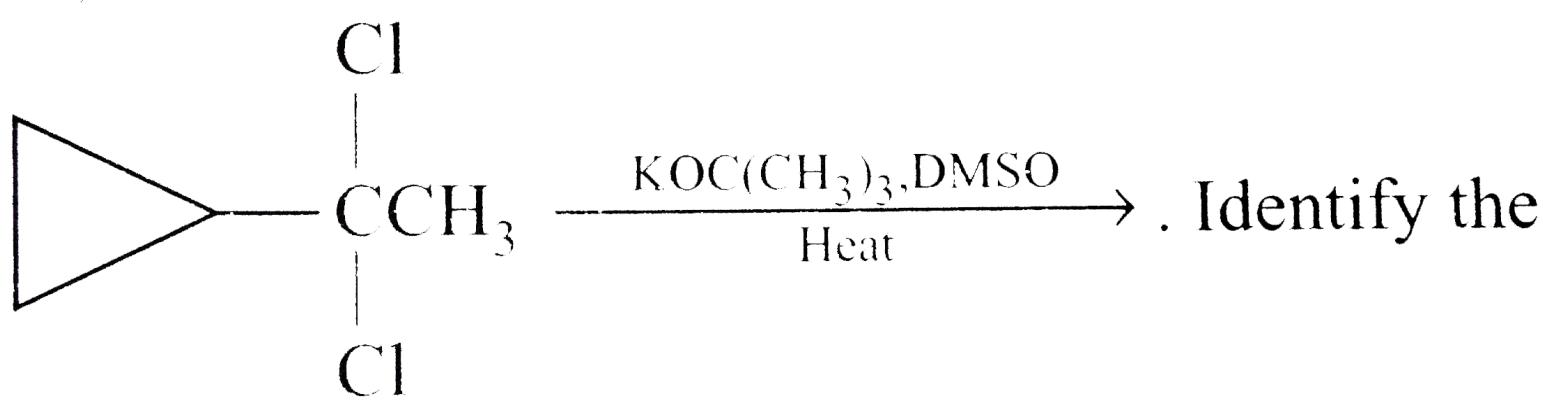
(D) $H - C \equiv C - H$

CORRECT ANSWER: A

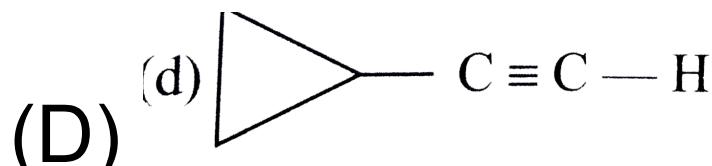
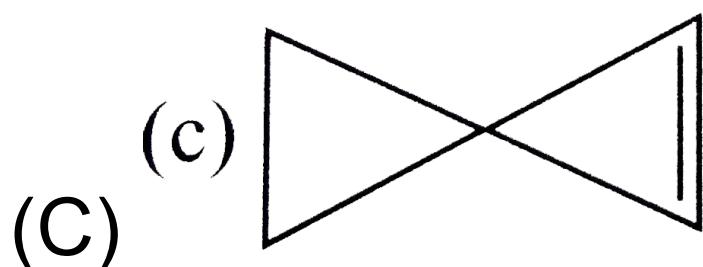
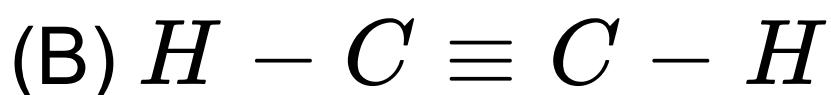
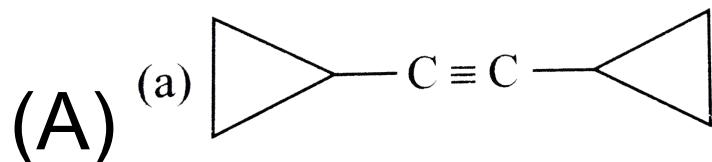
SOLUTION:

NaNH_2 is dehydrohalogenating agent (removes HBr)

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Identify the product.



CORRECT ANSWER: D

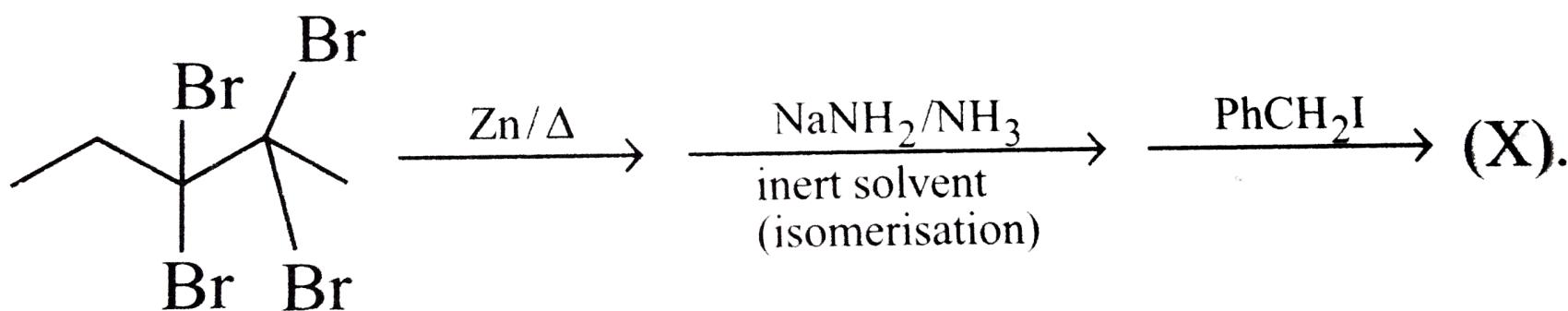
SOLUTION:

Since base is bulky, we get Hoffmann's product as a

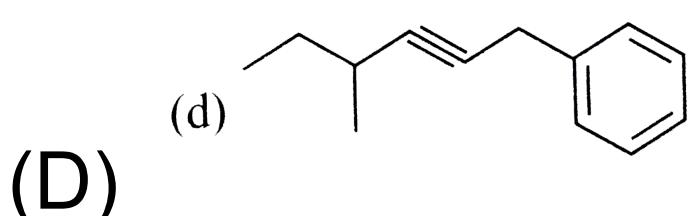
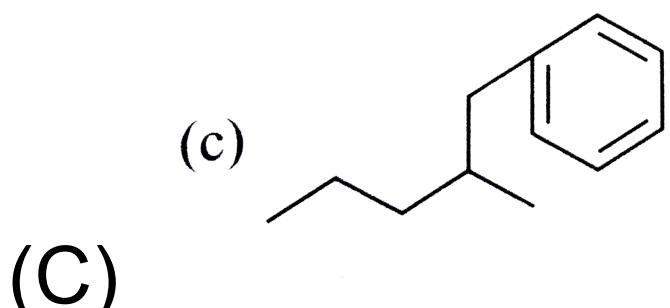
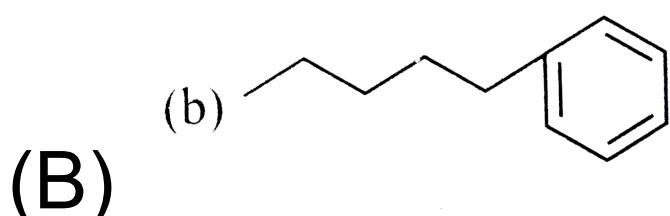
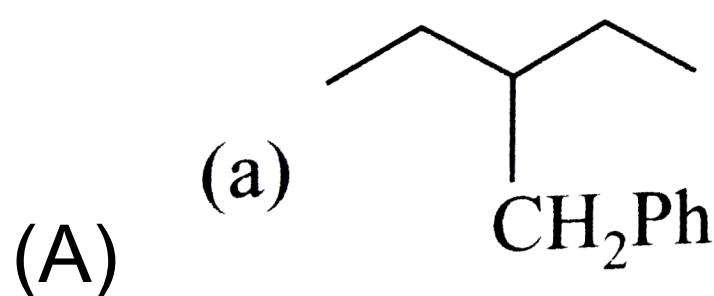
mjor product.

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Q-52 - 12676155

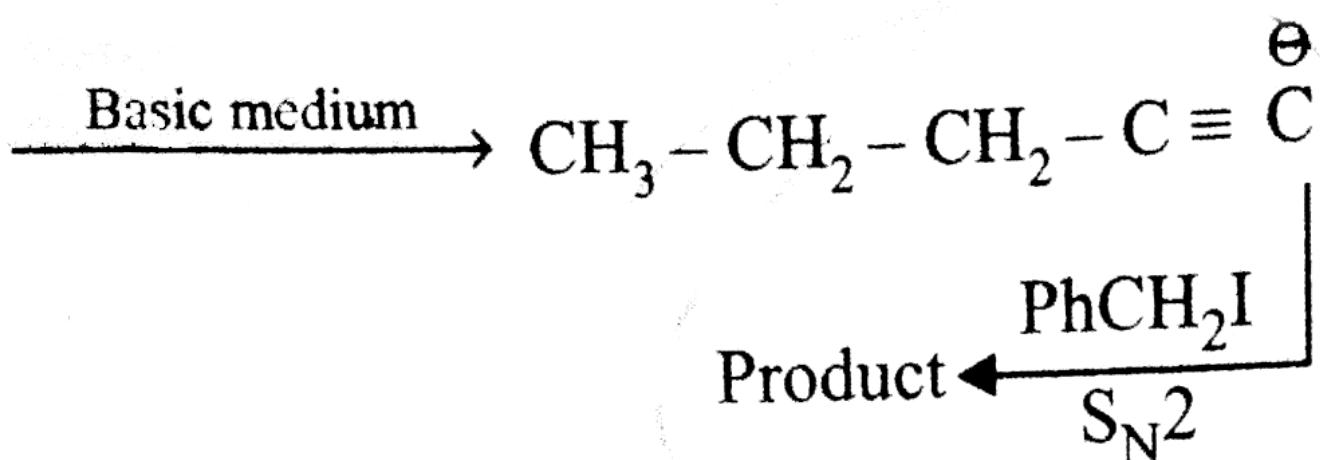
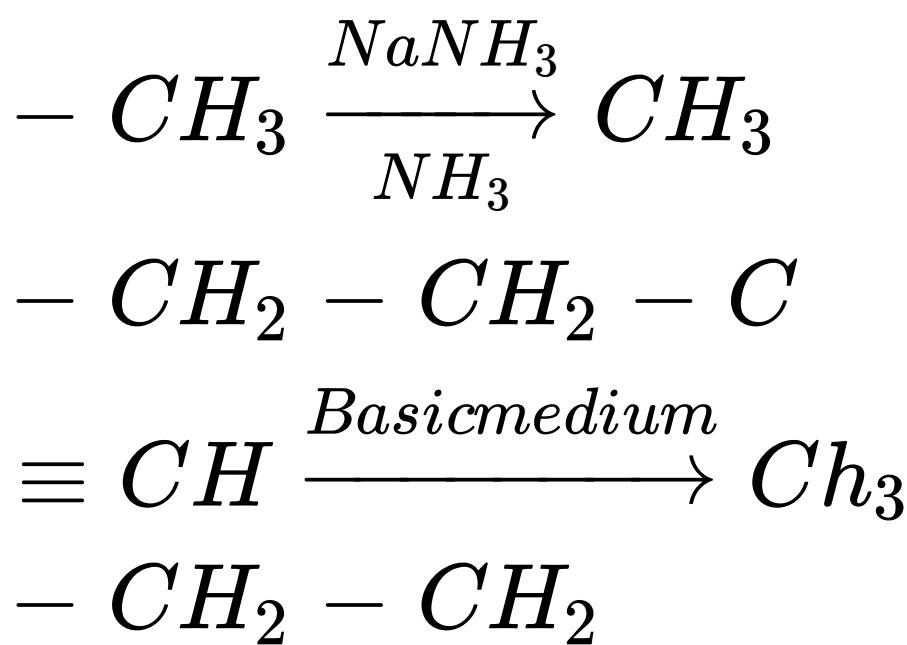


The end product (X) is



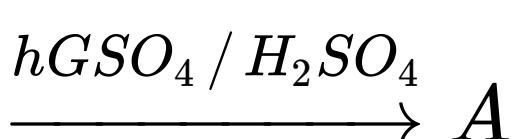
CORRECT ANSWER: D

SOLUTION:

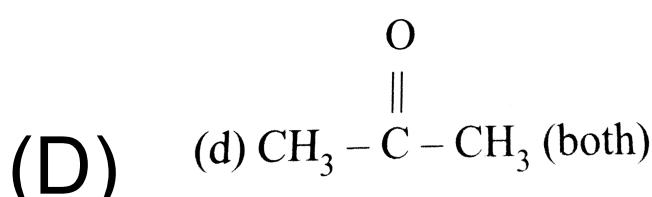
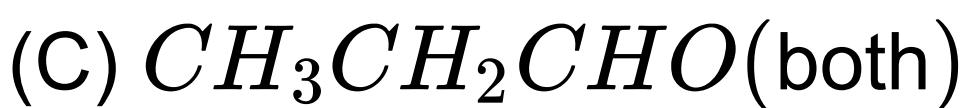
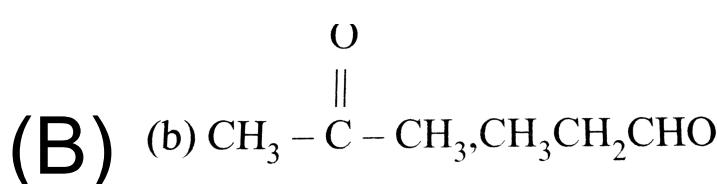
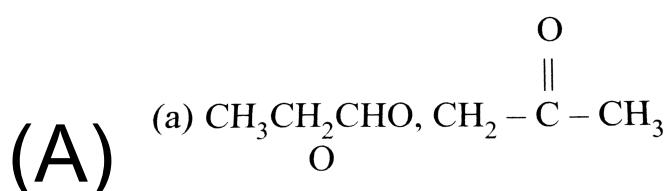


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Q-53 - 12676161

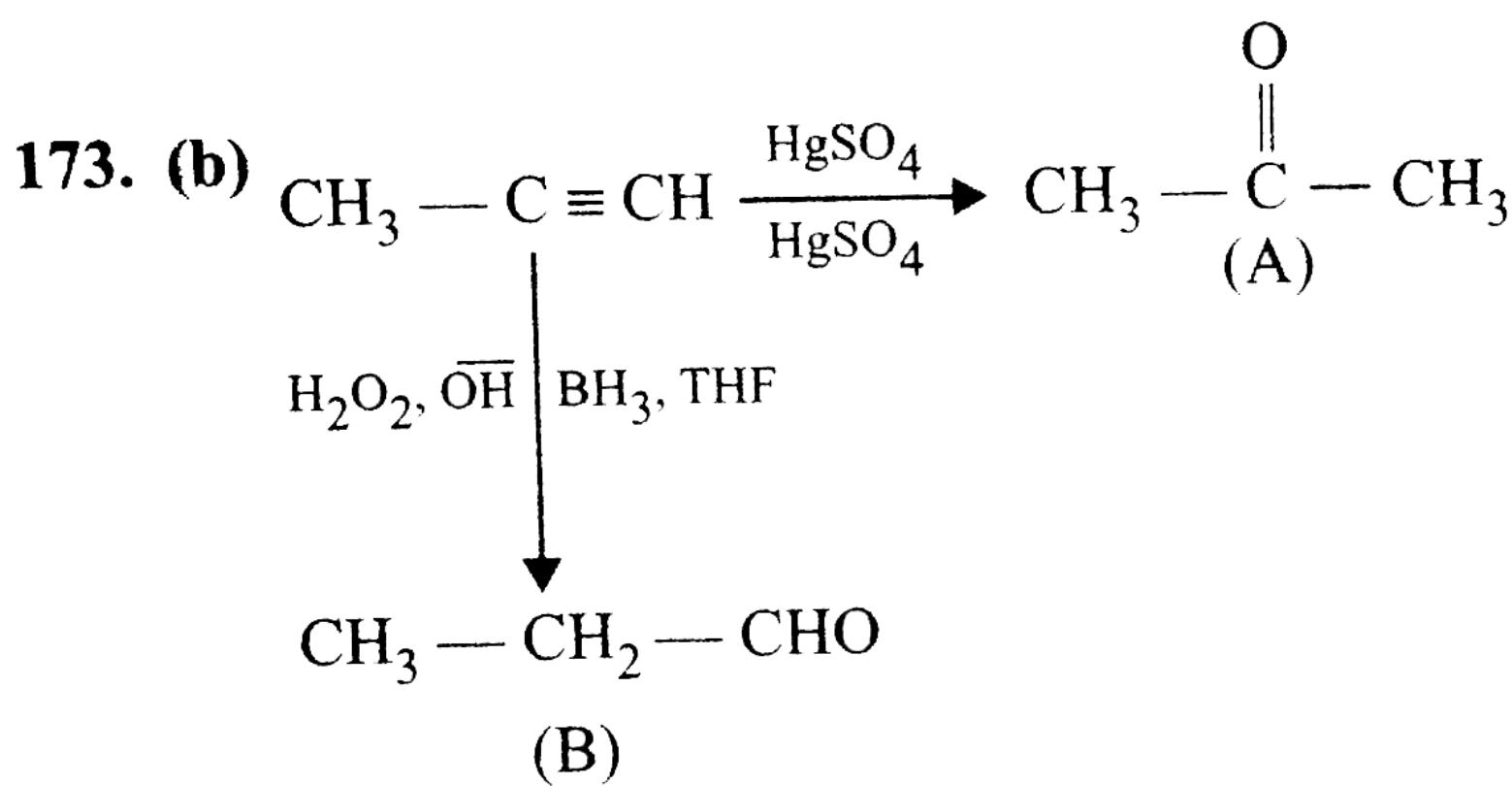


A and *B* are

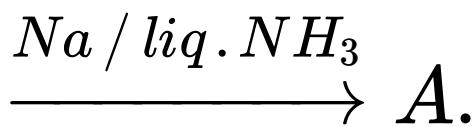
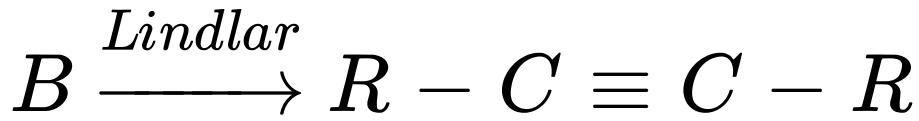


CORRECT ANSWER: B

SOLUTION:



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A and B are geometrica isomers ($R - CH = CH - R$)

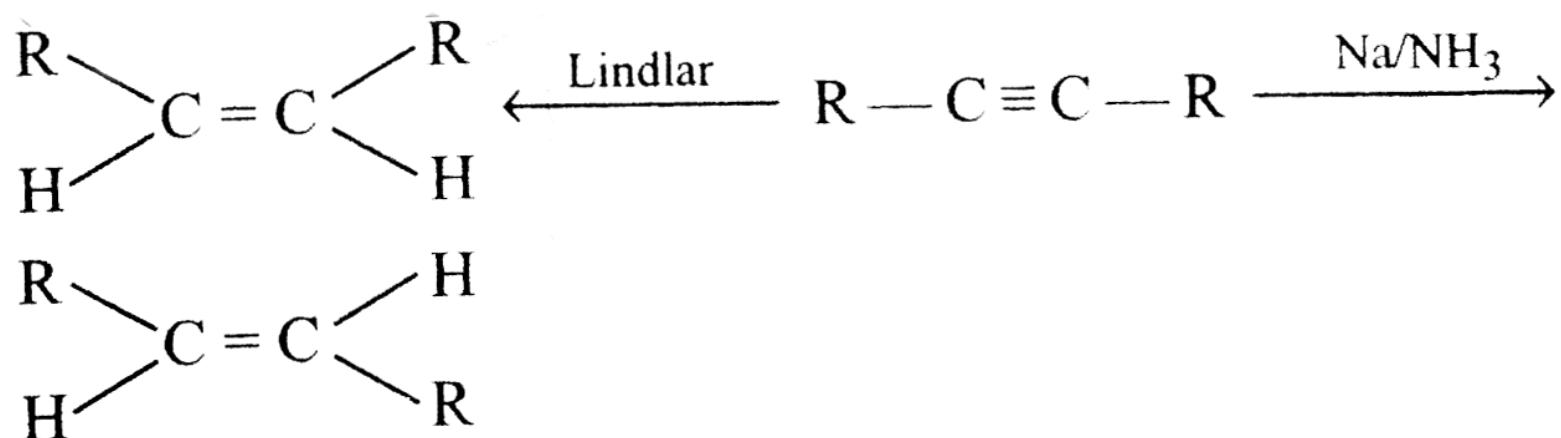
- (A) A is trans, B is cis
- (B) A and B both are cis
- (C) A and B both are trans
- (D) A is cis, B is trans

CORRECT ANSWER: A

SOLUTION:

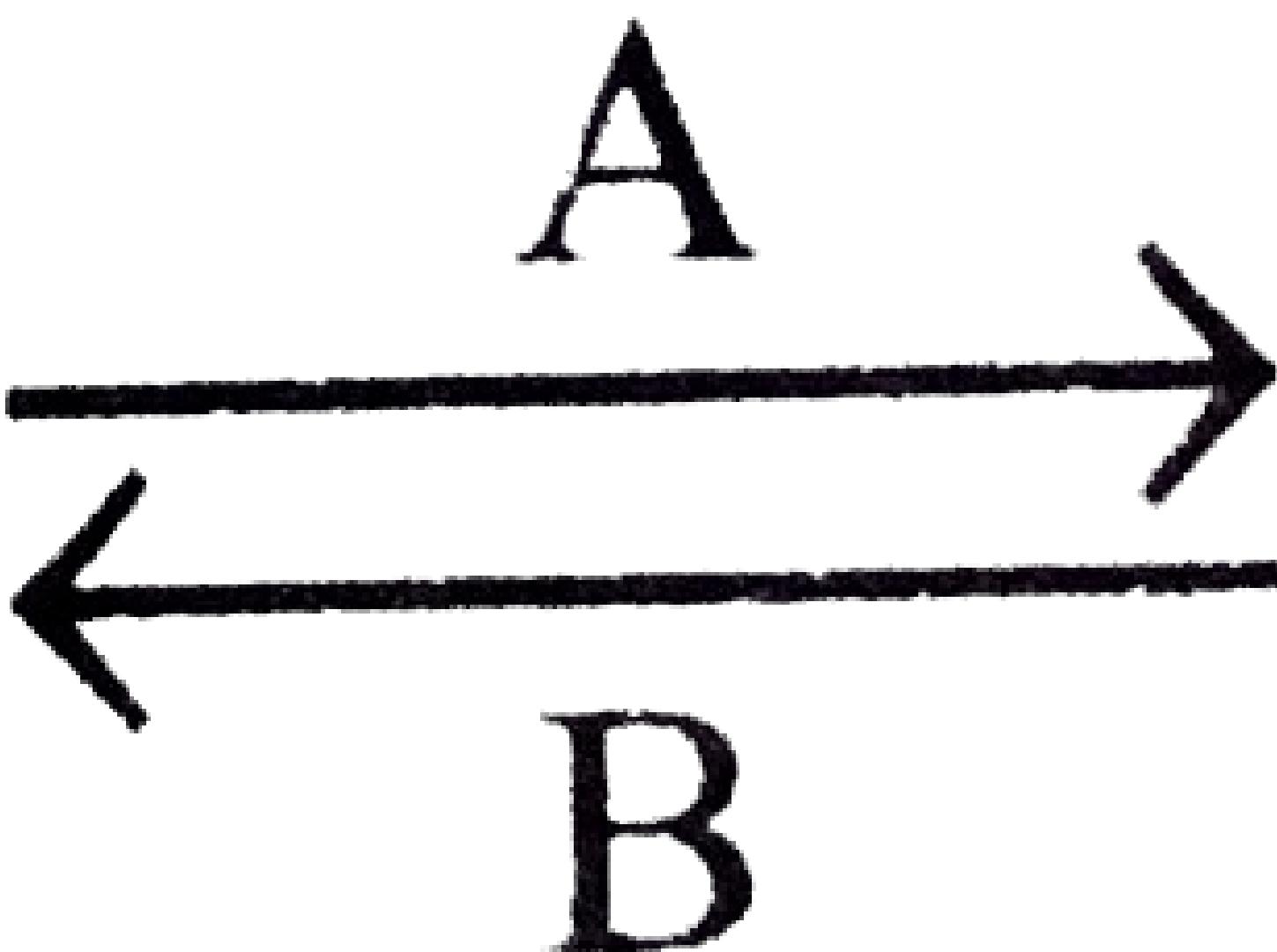
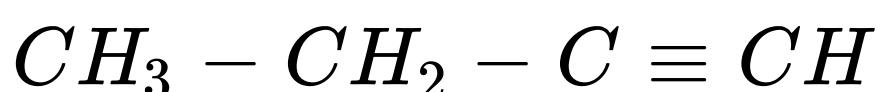
In the presence of Lindlar's catalyst addition up to alkyne takes place in cis manner but in the presence of

$Na + NH_3$ (liq.) addition up to alkyne is in trans manner.



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Q-55 - 12676167





A and *B* are

(A) alcoholic KOH and $NaNH_2$

(B) $NaNH_2$ and alcoholic KOH

(C) $NaNH_2$ and Lindlar

(D) Lindlar and $NaNH_2$

CORRECT ANSWER: A

SOLUTION:

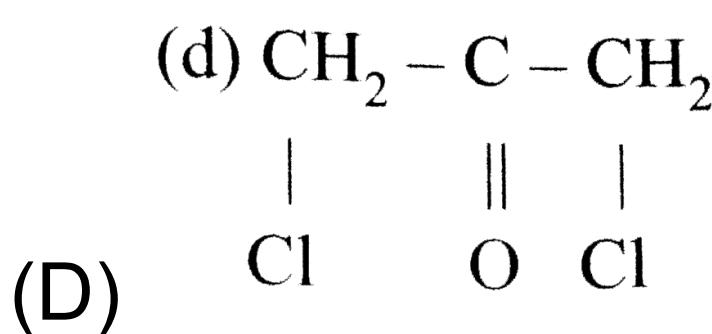
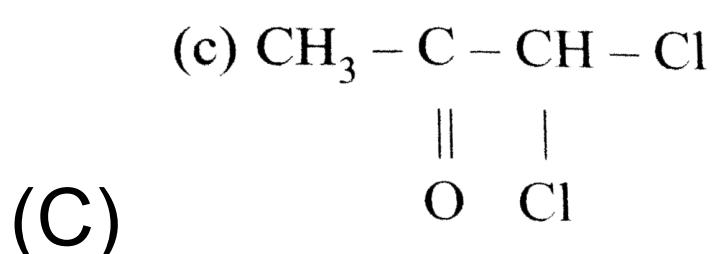
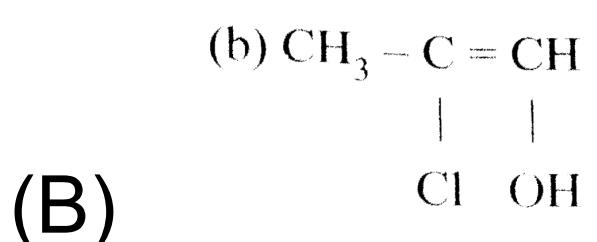
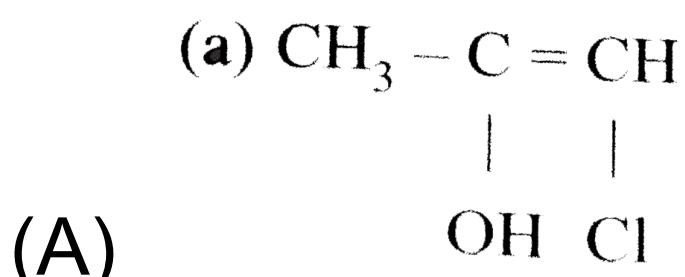
$NaNH_2 \rightarrow$ is used in the formation of terminal alkyne.

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Q-56 - 12676186

The addition of $HOCl$ to $CH_3 - C \equiv CH$ in the presence of

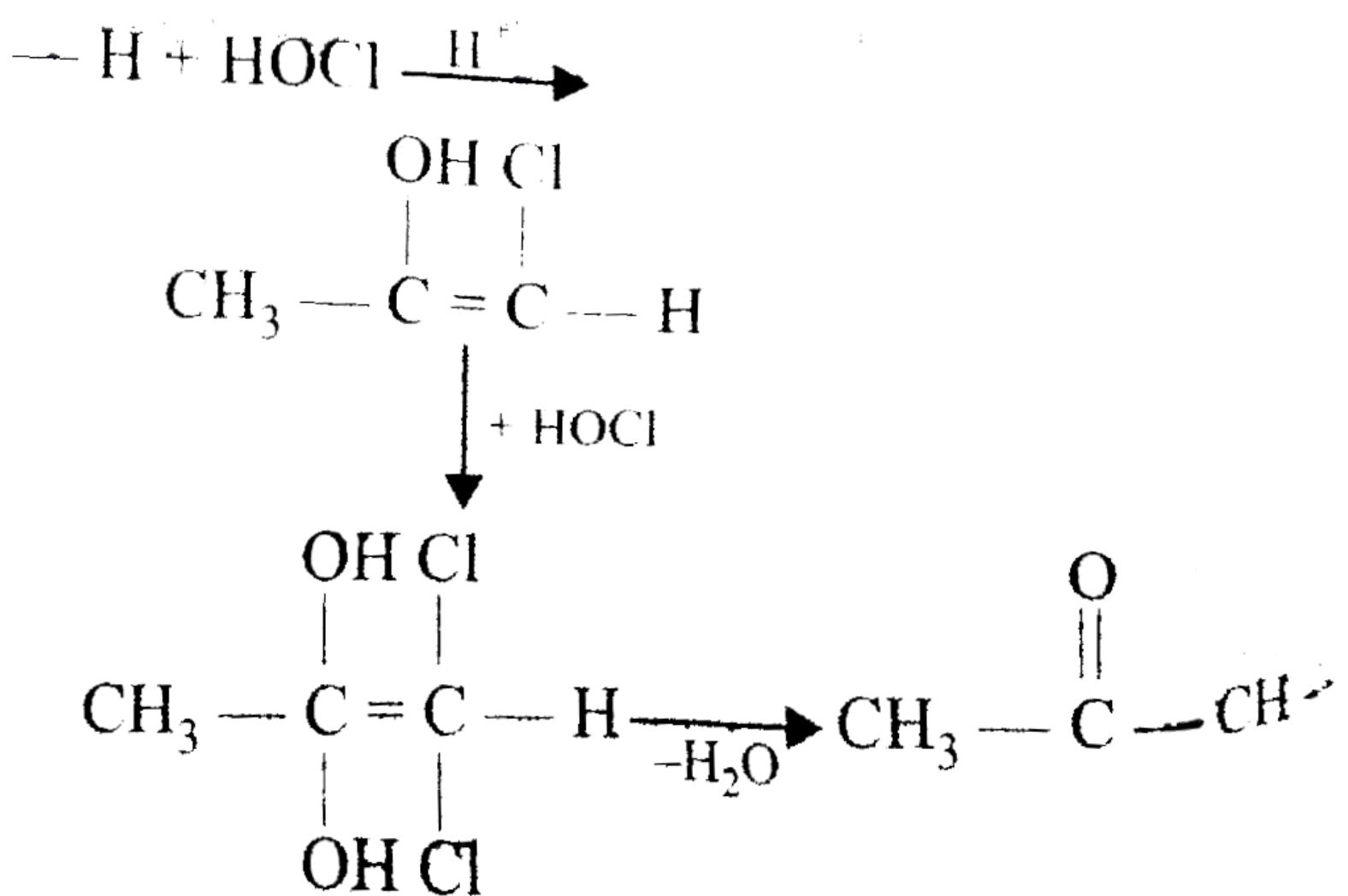
mineral acids produces.



CORRECT ANSWER: C

SOLUTION:

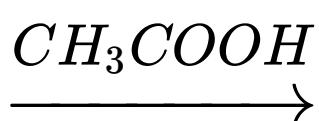
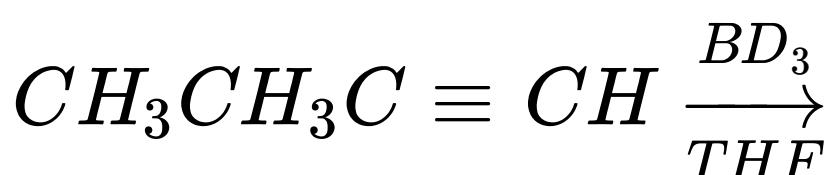
The addition of hypochlorous acid (HOCl) on propyne in the presence of mineral acids produce dichloroketones.



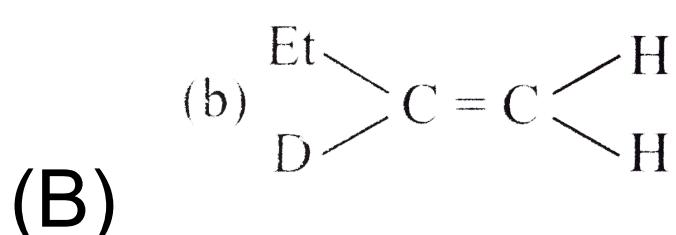
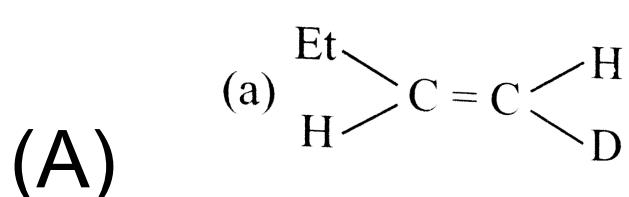
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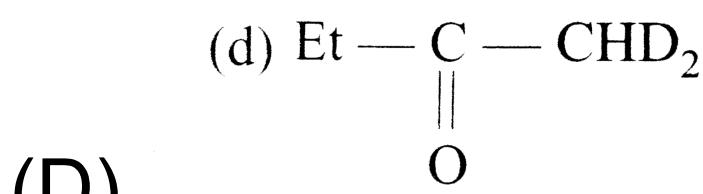
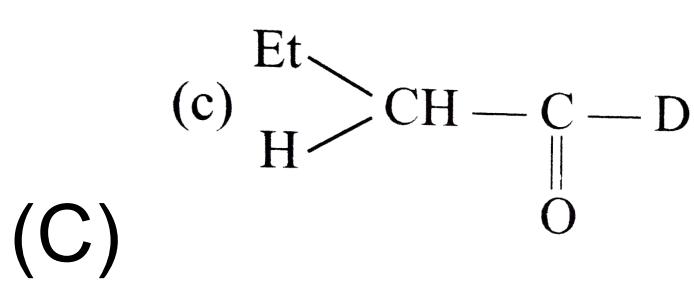
Q-57 - 12676188

The major product in the reaction



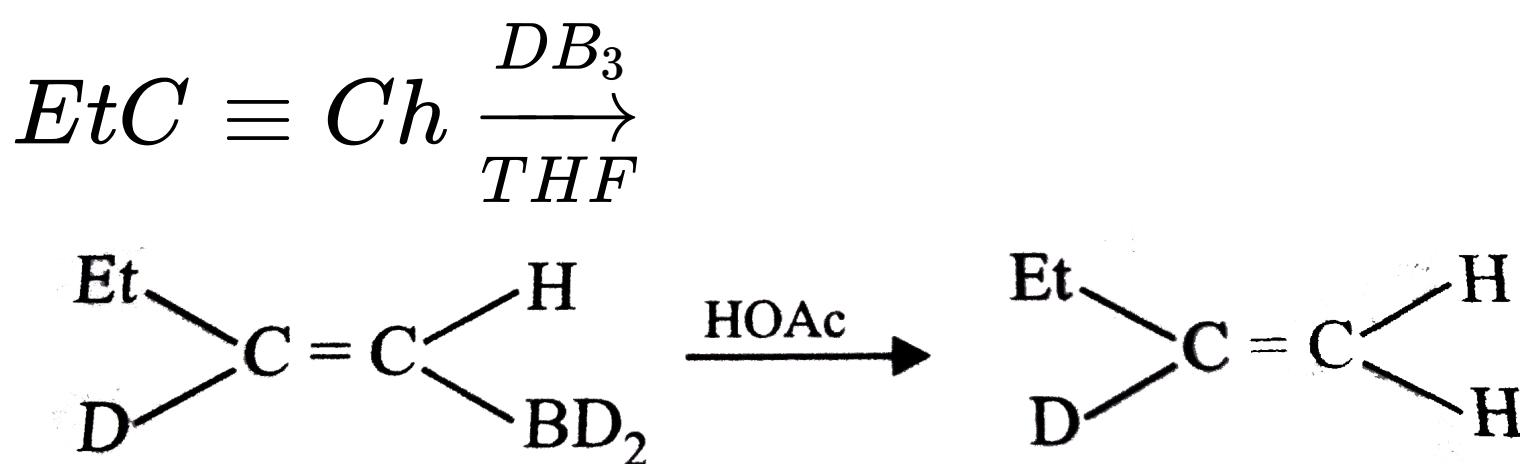
Product is





CORRECT ANSWER: B

SOLUTION:

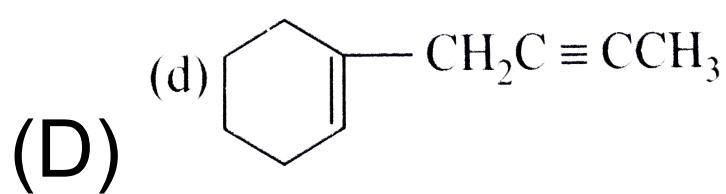
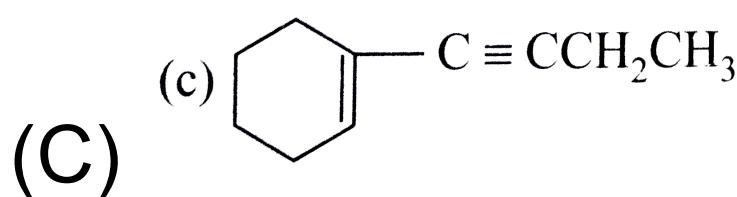
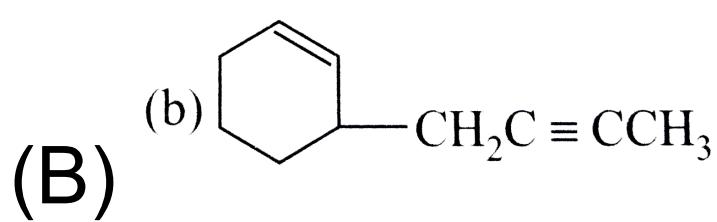
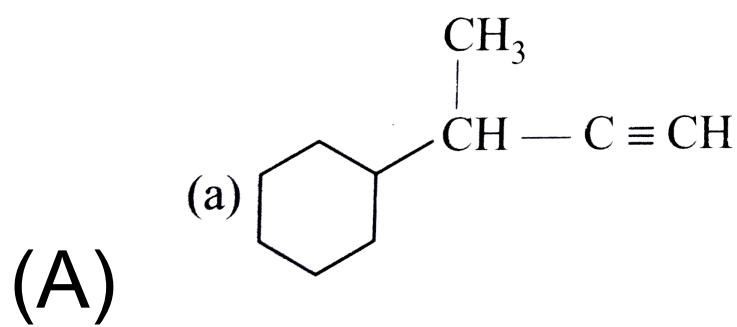


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Q-58 - 12676190

Catalytic hydrogenation of compound 'X' ($C_{10}H_{14}$) gives butyl cyclohexane. Treatment of 'X' with $Cu(NH_3)_2 + NaNH_2$. When 'X' is first reacted with H_2 / Ni_2B and then oxidatively

ozonized, a non resolvable compound is formed. The organic compound ' X ' is

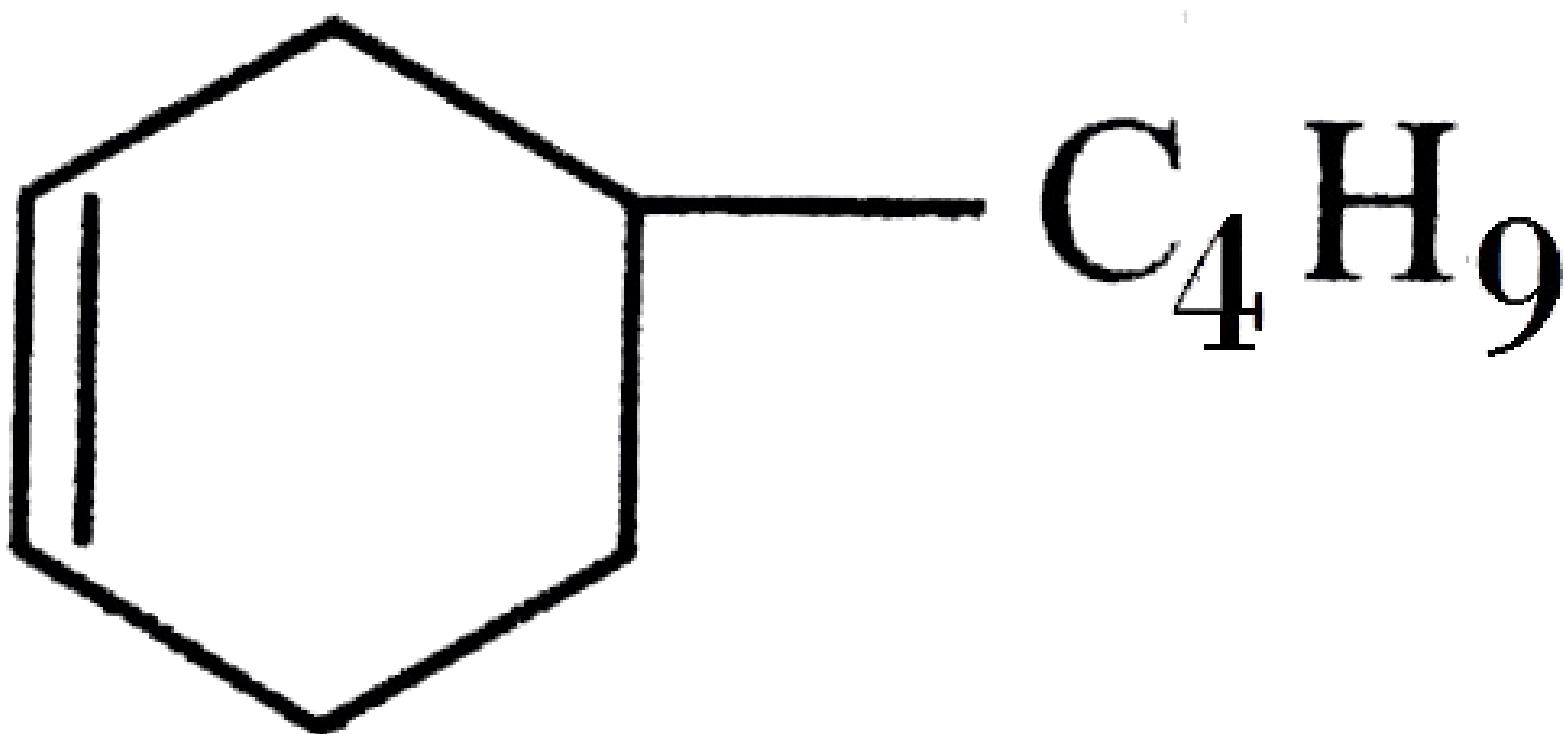


CORRECT ANSWER: D

SOLUTION:

$$(X) \\ C_{10}H_{14}(D)U = 4$$

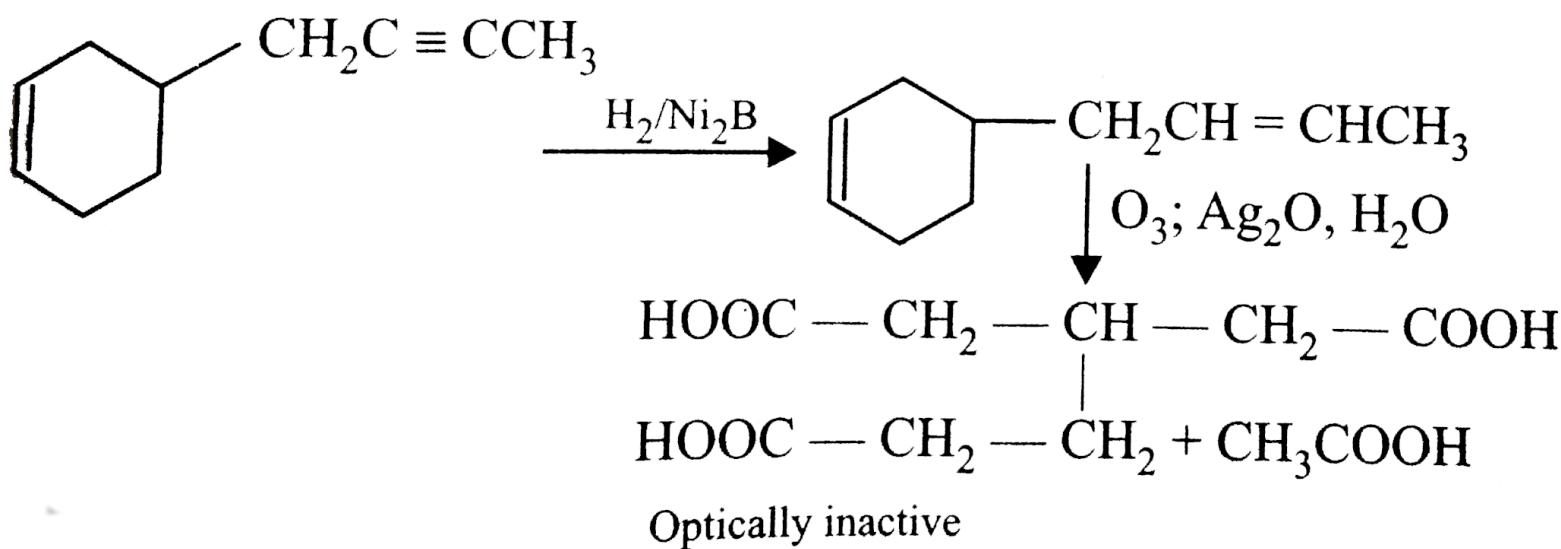
Catalytic
→
Hydrogenation

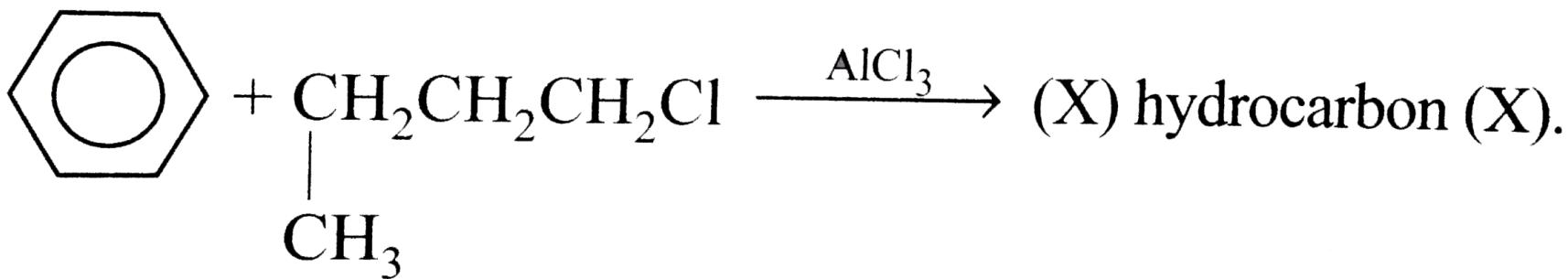


$\text{Cu}(\text{NH}_3)_2^+$ gives no ppt. \Rightarrow no terminal triple bond
 but gives ppt. with $\text{Cu}(\text{NH}_3)_2^+$ on treatment of NH_2^-
 \Rightarrow there is internal triple bond.

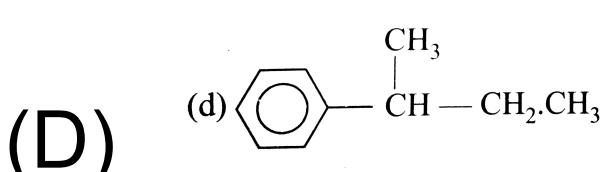
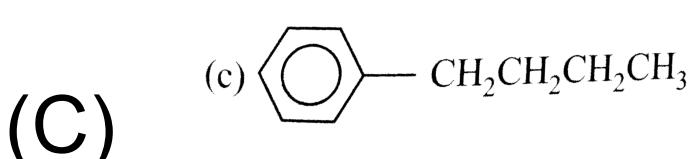
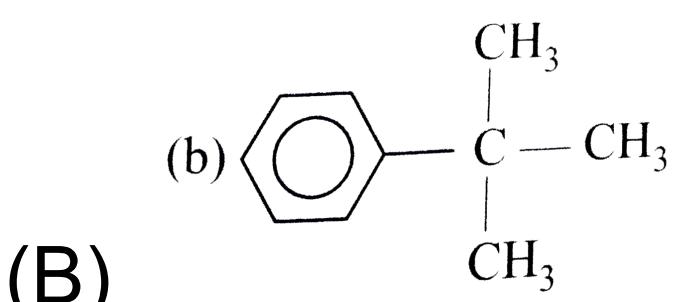
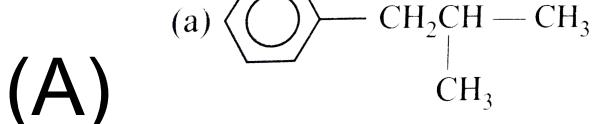
In the ring triple bond is not possible.

$\text{H}_2 / \text{Ni}_2\text{B}$ treatment reduces triple bond to double bond. Now possible options are (b)(c) and (d).
 Oxidative ozonolysis gives non – resolvable compound. So only (d) is possible.



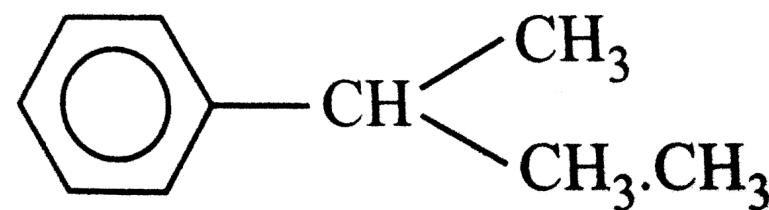
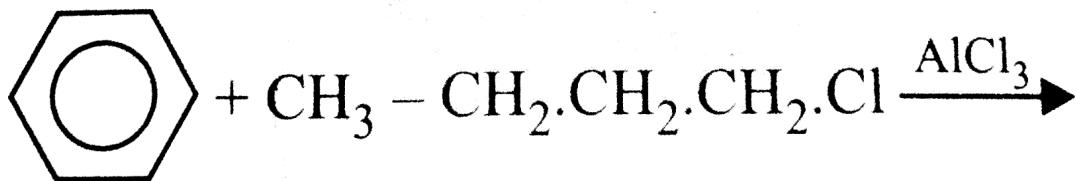


Major product X is



CORRECT ANSWER: D

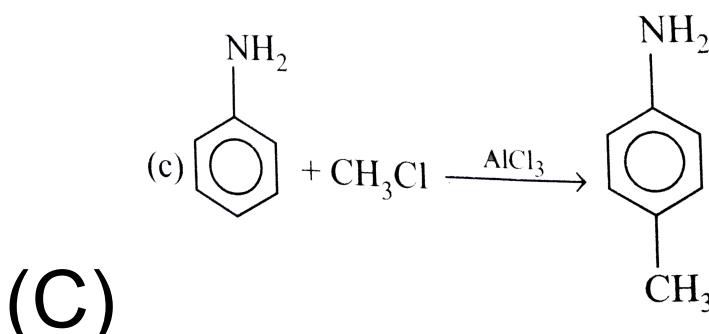
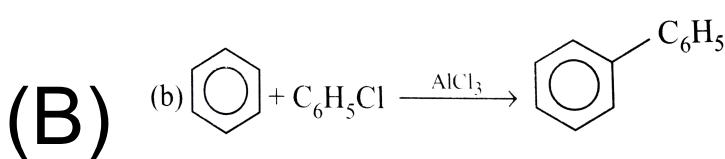
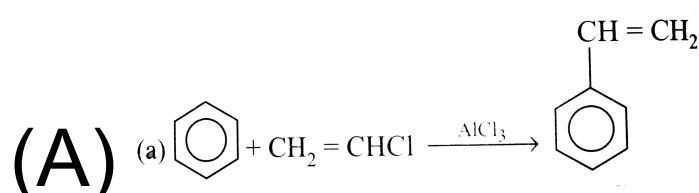
SOLUTION:



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Which of the reaction is not possible ?

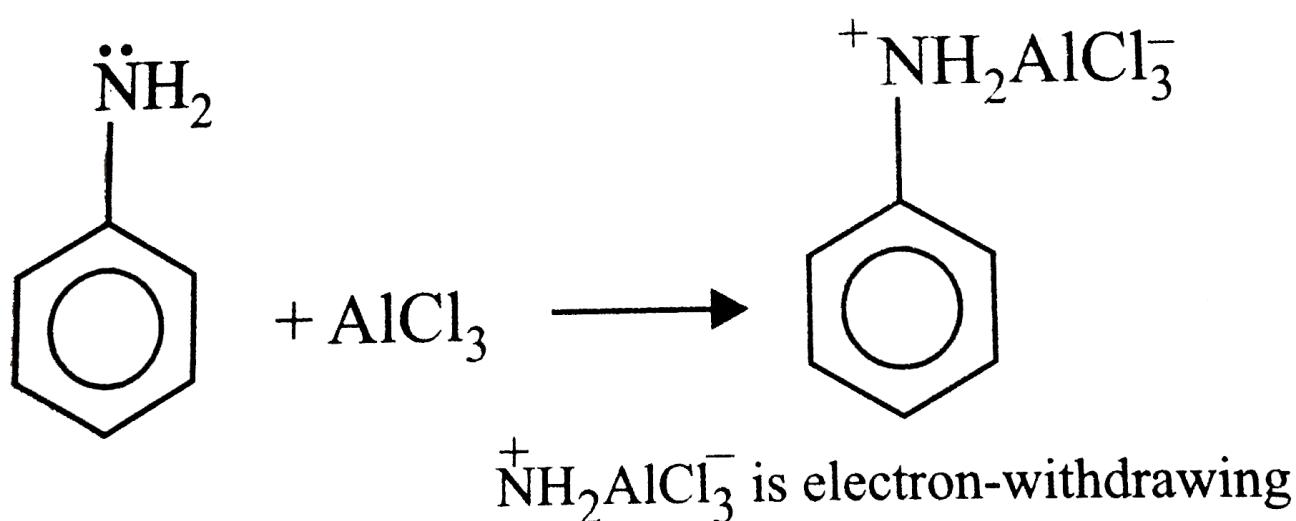


(D) All of three

CORRECT ANSWER: D

SOLUTION:

Vinyl and aryl halides can't be used as the halide component because they do not form carbocations readily, $-NH_2$, $-NHR$ and $-NR_2$ groups react with Lewis acids used in Friedel – Crafts reaction to form electron – withdrawing groups, which deactivate the benzene nucleus for electrophilic substitution.



On the same, presence of electron – withdrawing group like

- $-NO_2$, $-+(N)H_3$
- $-CF$, $-COOH$,
- $-COR$, $-SO_3H$,

etc., make the benzene ring less prone to Friedel –

Crafts reaction.

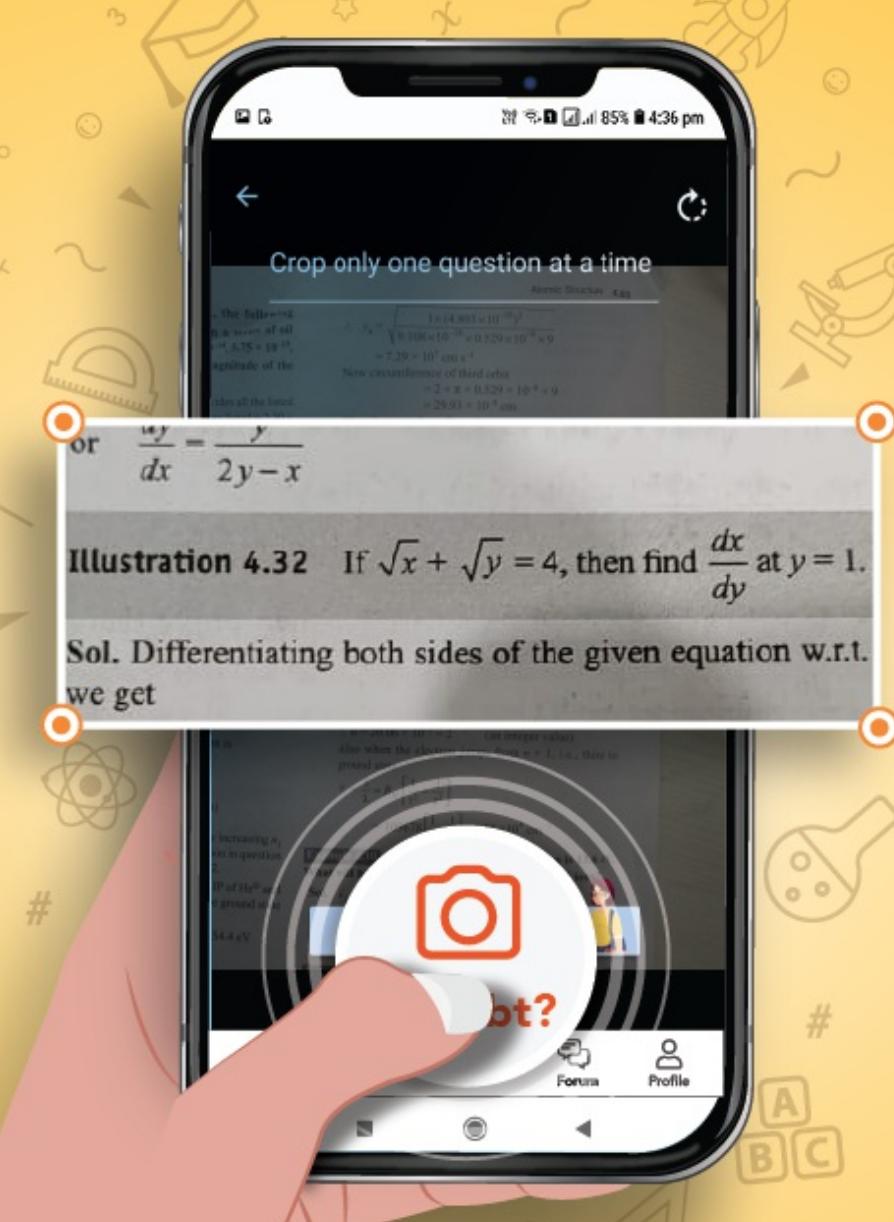
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