

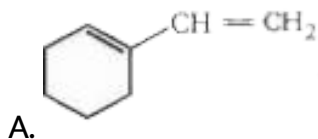
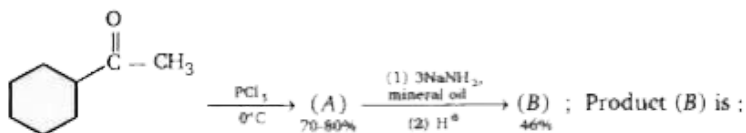
## CHEMISTRY

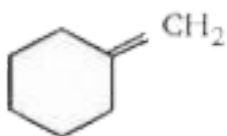
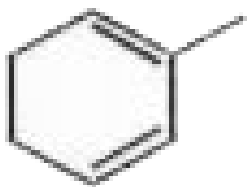
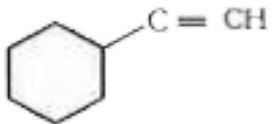
### BOOKS - MS CHOUHAN

### HYDROCARBONS (ALKYNES)

Level 1

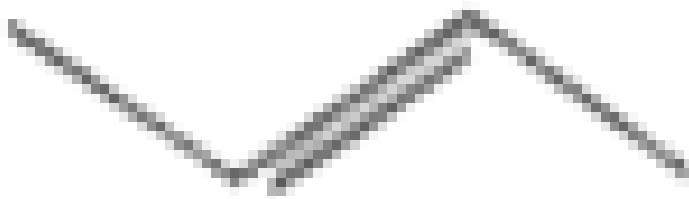
1. Complete the following reaction



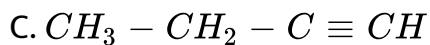
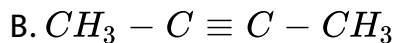
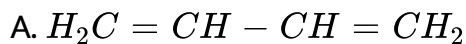
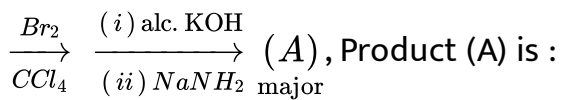


**Answer: B**

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2.

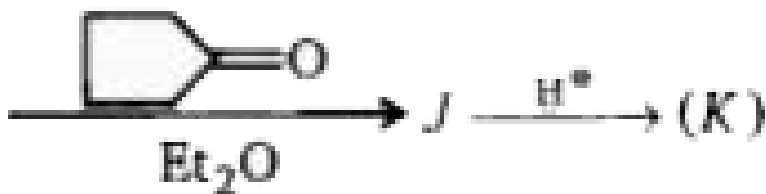
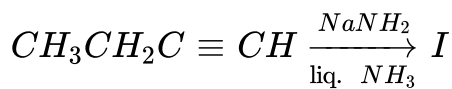


**Answer: B**

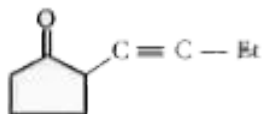


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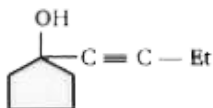
3.



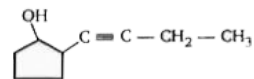
Product (K) of the above reaction is :



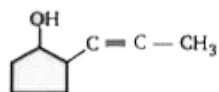
A.



B.



C.

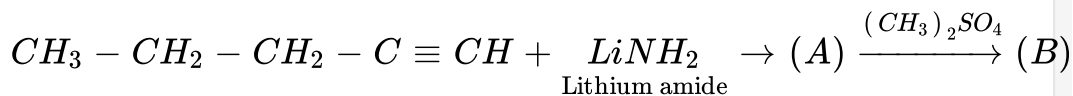


D.

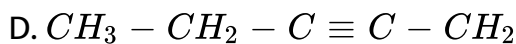
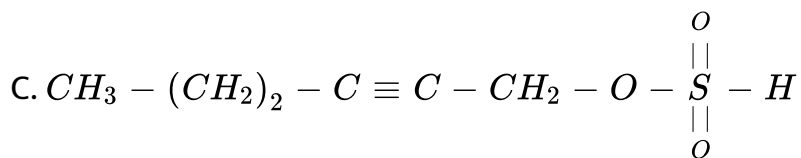
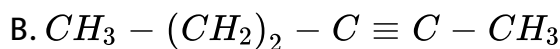
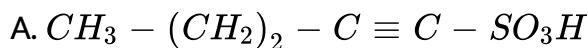
Answer: B


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4.



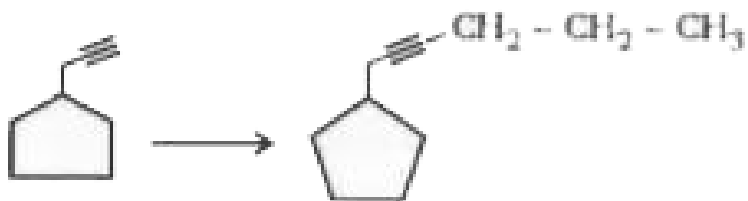
Give the structural formula of compound (B) :



Answer: B

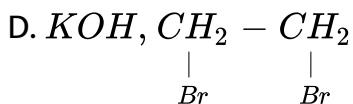
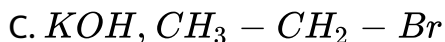
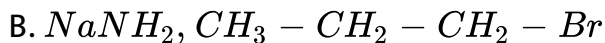
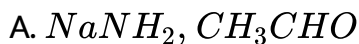


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, This

conversion can be achieved by :

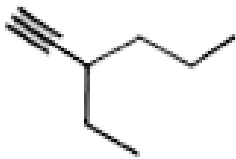


**Answer: B**

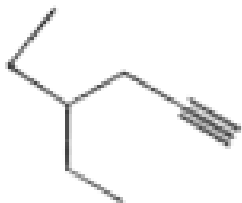
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6. Which alkyne will give 3- Ethyl hexane on catalytic hydrogenation

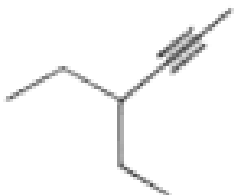
?



A.



B.



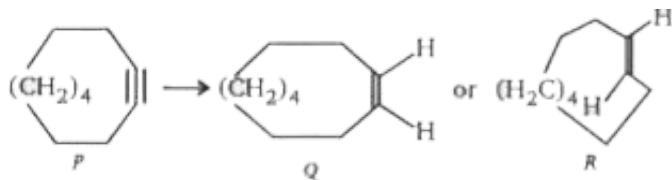
C.

D. All of these

**Answer: D**

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7. Reactant P gives products Q or R.



The possible reagents are :

(I)  $2\text{Na}/\text{liq. } \text{NH}_3$  (II)  $\text{H}_2 / \text{Pd} / \text{CaCO}_3$  (quinoline) (III)  $2\text{H}_2 / \text{Pd} / \text{C}$

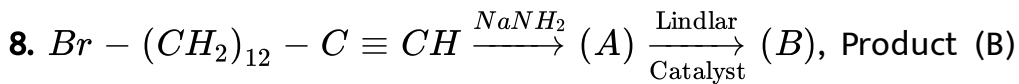
The correct statement with respect to the above conversion is/are :

- A. Q is obtained on treatment with reagent (I)
- B. R and Q are obtained on treatment with reagent (II)
- C. R is obtained on treatment with reagent (I)
- D. R is obtained on treatment with reagent (II)

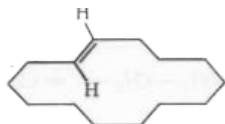
**Answer: C**

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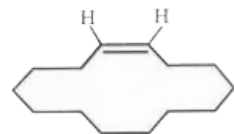




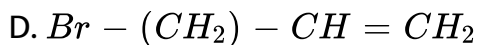
is



B.



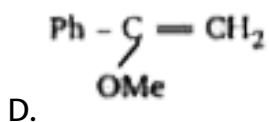
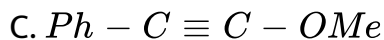
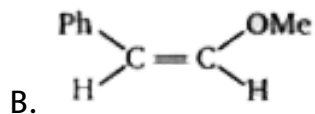
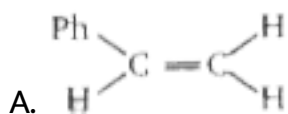
C.



Answer: C

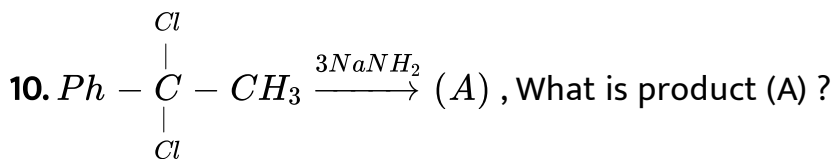
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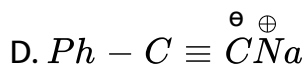




Answer: B

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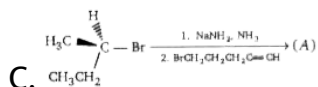
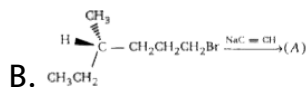
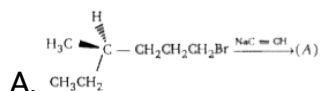
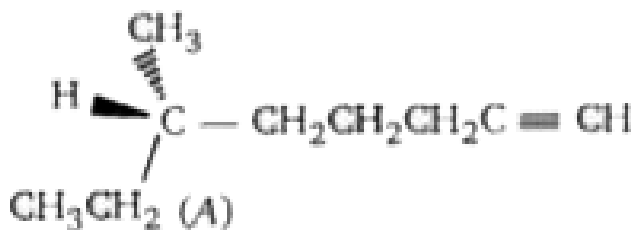


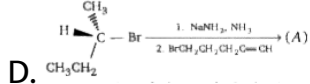


Answer: D

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11. Which combination is best for preparation of the compound (A) shown below ?

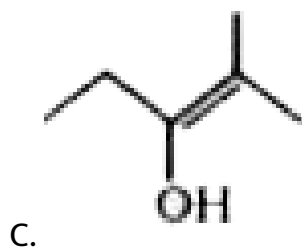
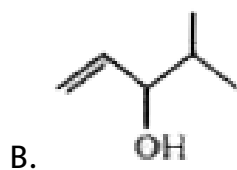
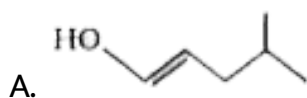




Answer: B

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12. Which one of the following is the intermediate in the preparation of a ketone by hydration of an alkyne in the presence of sulfuric acid and mercury (II) sulphate ?

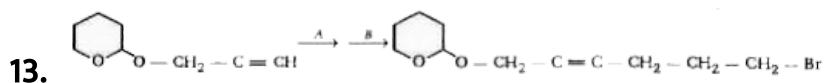




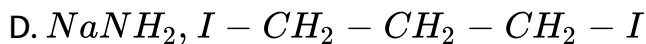
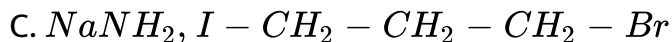
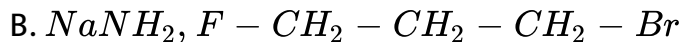
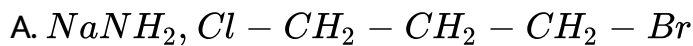
D.

Answer: D

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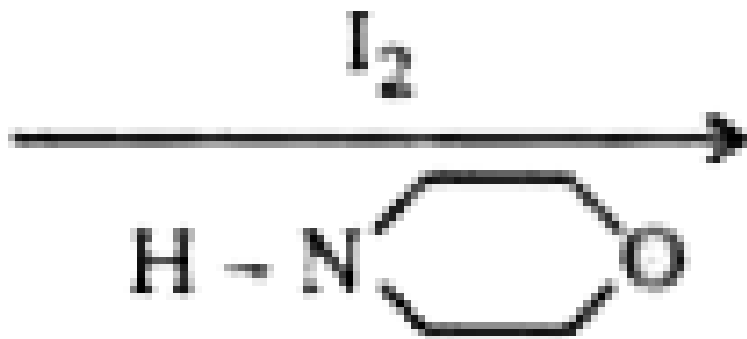
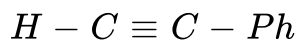


To carry out above conversion , (A) and (B) respectively, are :



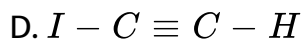
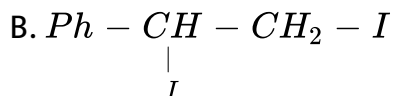
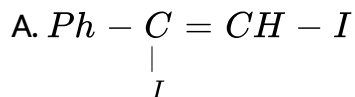
Answer: C

14.

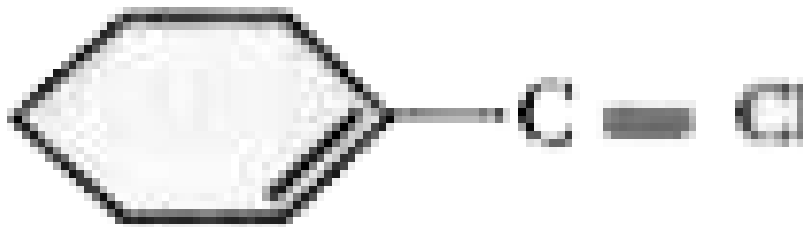


, Product

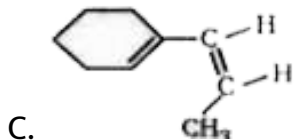
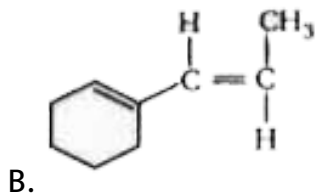
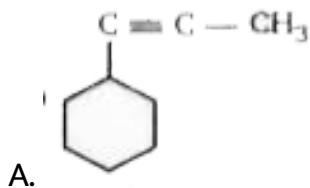
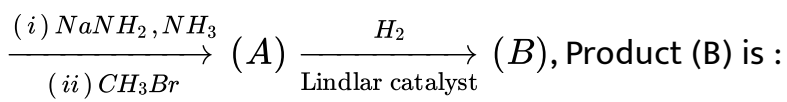
obtained in this reaction is :

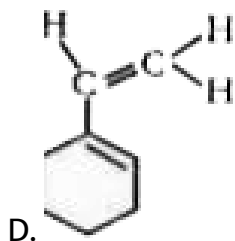


Answer: C



15.





**Answer: C**

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16. Which of the following alkynes on treatment with  $H_2$  (92 mole)/pt gives an optically inactive compound ?

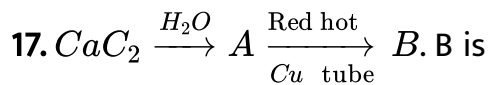
- A. 3-Methyl-1-pentyne
- B. 4-Methyl-1-hexyne
- C. 3-Methyl-1-heptyne
- D. None of the above

**Answer: A**





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A. Toluene

B. Ethyl-benzene

C. Benzene

D. Butyne

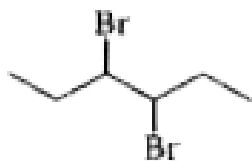
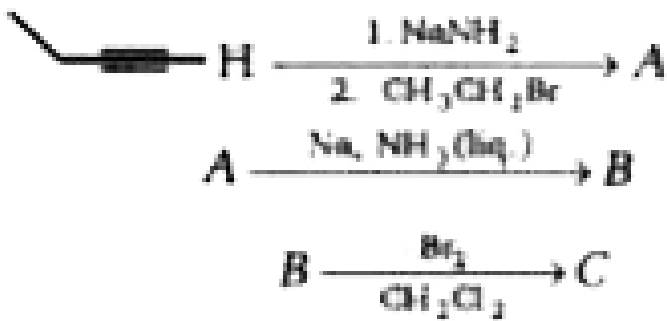
Answer: C



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18. What is the final product, C, of the following reaction sequence

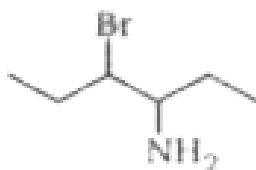
?



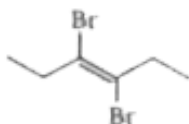
A.



B.



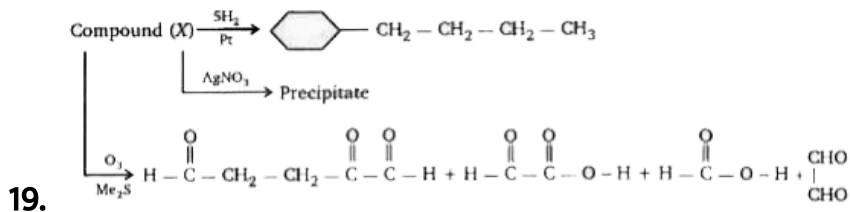
C.







D.

Answer: A

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Compound (X) will be :

- A.  - CH = CH - C = CH
- B.  = CH - CH<sub>2</sub> - C = CH
- C.  = CH - CH<sub>2</sub> - C = CH
- D.  = C = CH - C = CH

Answer: A

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20. Choose the sequence of steps that describes the best synthesis of 1-butene from ethanol :

A. (1)  $\text{NaC} \equiv \text{CH}$ , (2)  $\text{H}_2$ , Lindlar Pd

B. (1)  $\text{NaC} \equiv \text{CH}$ , (2)  $\text{Na}$ ,  $\text{NH}_3$

C. (1)  $\text{HBr}$ , heat, (2)  $\text{NaC} \equiv \text{CH}$ , (3)  $\text{H}_2$ , Lindlar Pd

D. (1)  $\text{HBr}$ , heat, (2)

$\text{KOC}(\text{CH}_3)_2$ ,  $\text{DMSO}$ , (3)  $\text{NaC} \equiv \text{CH}$ , (4)  $\text{H}_2$ , Lindlar catalyst

Answer: C

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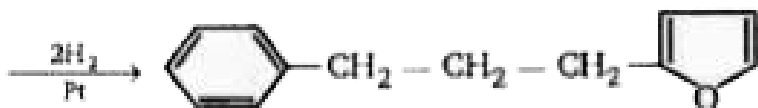
21. Which alkyne yields butanoic acid ( $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{CO}_2\text{H}$ ). As the only organic

product on treatment with ozone followed by the hydrolysis ?

- A. 1-Butyne
- B. 4-Octyne
- C. 1-Pentyne
- D. 2-Hexyne

**Answer: B**

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Carlina oxide

22.

Unit of unsaturation in compound (A) ?

- A. 7
- B. 8

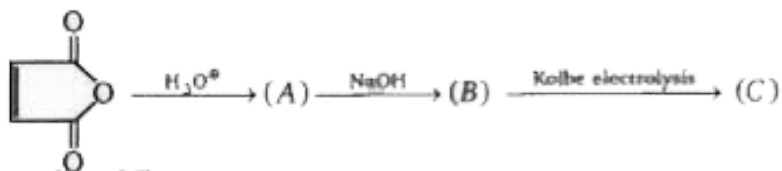
C. 9

D. 10

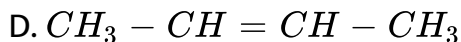
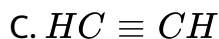
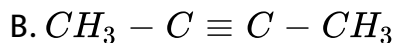
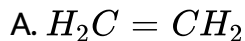
Answer: C

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23.



product (C) of above reaction is :



Answer: C



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24. To convert 1-butyne to 1-D-butanal, one would carry out the following steps:

(I) Sodium amide, then  $D_2O$

(II) Disiamylborane, then hydrogen peroxide/sodium hydroxide

(III) The transformation can not be carried out with the indicated reagents.

A. I, followed by II

B. II, followed by I

C. III

D. II

**Answer: C**



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25. An unknown compound (A) has a molecular formula  $C_4H_6$ . When (A) is treated with excess of  $Br_2$  a new substance (B) with formula  $C_4H_6Br_4$  is formed. (A) forms a white ppt. with ammonical silver nitrate solution. (A) may be :

- A. But-1-yne
- B. But-2-yne
- C. But-1-ene
- D. But-2-ene

**Answer: A**

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26. 1,2-Dibromopropane on treatment with X moles of  $NaNH_2$  followed by treatment with ethyl bromide gave a pentyne. The

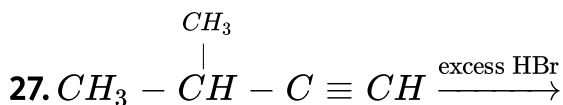


value of X is

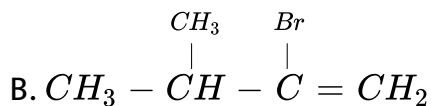
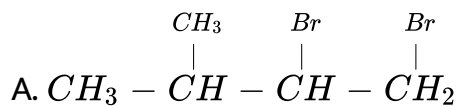
- A. One
- B. Two
- C. Three
- D. Four

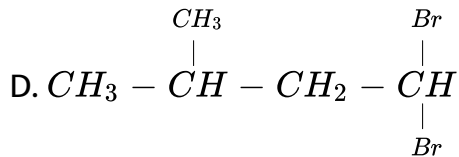
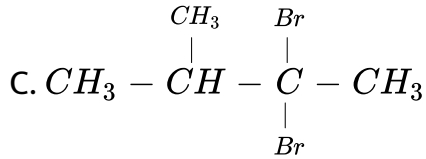
**Answer: C**

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The product of the above reaction is :

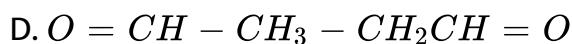
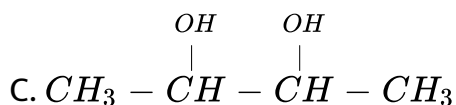
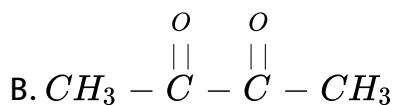
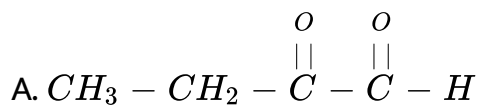




Answer: C

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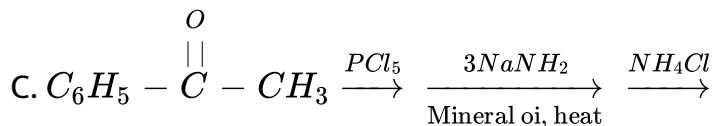
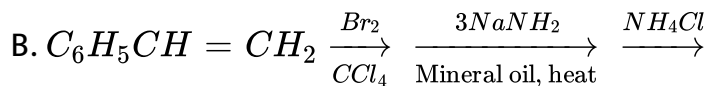
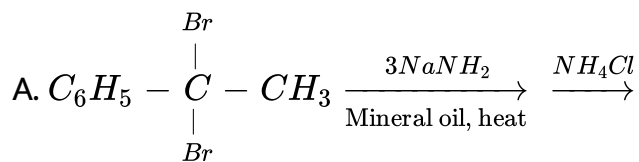
28.  $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_3 \xrightarrow{\text{KMnO}_4 / \text{H}^+}$  product in this reaction



Answer: B

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29. In which reaction last product is  $Ph - C \equiv CH$  ?

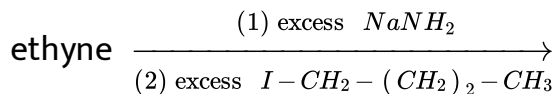


D. All

Answer: D

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30. Predict the product of the following reaction sequence.



A. 6-iodo-1-hexyne

B. 1-hexyne

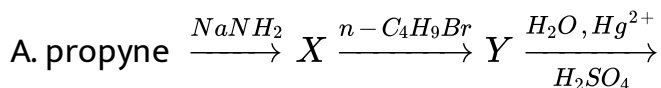
C. 5-decyne

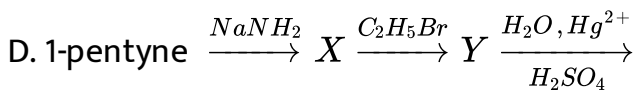
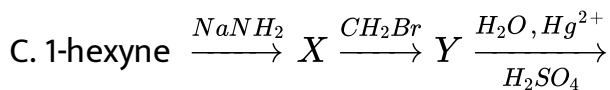
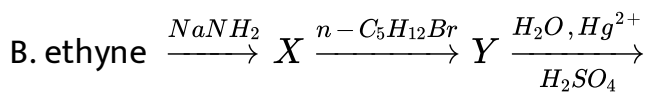
D. 1-iodo-1-hexene

Answer: C

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31. Give the sequence of reactions to prepare 2-butanol starting from 1-butene.





Answer: B

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32. The major product of the reaction of 2-butene with cold alkaline

$KMnO_4$ , is



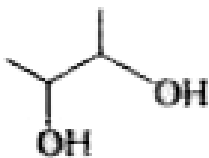
A.



B.



C.



D.

**Answer: D**



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