



CHEMISTRY

NCERT - NCERT CHEMISTRY(GUJRATI)

HYDROXY DERIVATIVES

Problem

1. How is the following conversion effected ?

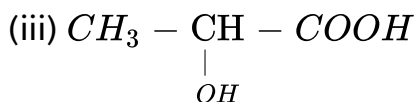
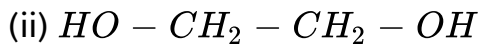
Ethyl alcohol \rightarrow Ethylene glycol



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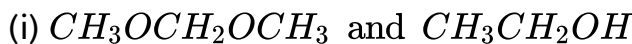
2. Give the IUPAC names of

(ui) $CH_3CH(OH)CH_2OH$

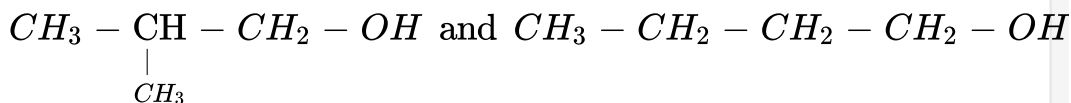


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3. Identify the isomerism in each of the following pairs.



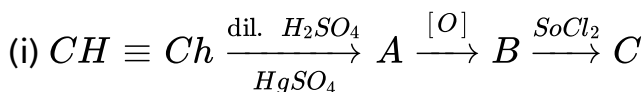
(iii)



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4. Complete the following equations by writing the missing A, B,

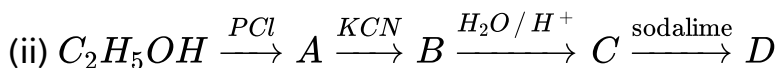
C, D etc.





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5. Complete the following equations by writing the missing A, B, C, D etc.



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6. Why alcohols cannot be used as solvents with (a) Grignard reagent and (b) $LiAlH_4$.



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7. When tertiary butyl alcohol and 1-butanol are separately treated with a few drops of $KMnO_4$, in one case only the purple

colour disappears and a brown precipitate is formed. Which of the two alcohols gives the above reaction and what is that brown precipitate.



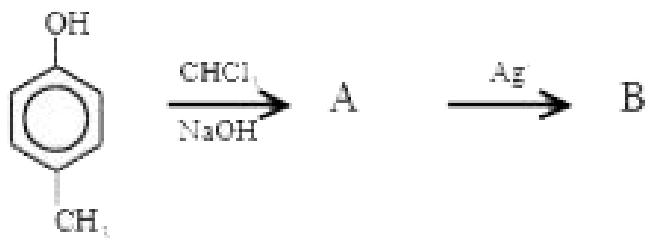
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8. Compound (A) $C_6H_{12}O_2$ on reduction with $LiAlH_4$ yields two compounds B and C. The compound (B) on oxidation gave (D) which on treatment with aqueous alkali and subsequent heating furnished E. The latter on catalytic hydrogenation gave (C). Compound (D) on oxidation gave monobasic acid (molecular formula weight = 60). Deduce the structure of (A), (B), (C), (D) and (E).



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1. Identify the product A and B.



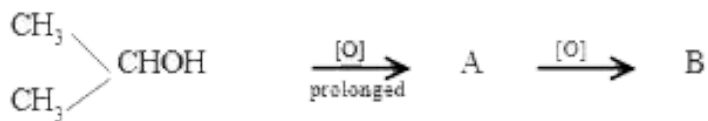
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2. Identify C and D.



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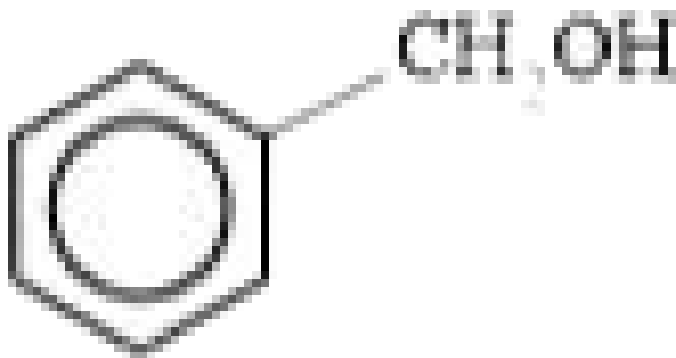
3. Identify the product. A and B



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Practice

1. Write the IUPAC names of (i) $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OH}$ (ii) $\text{CH}_3\text{OCH}_2\text{OCH}_3$ and (iii)



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2. Why sodium metal cannot be used to dry alcohols but it can be used to dry ethers ?

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3. An organic compound has the formula $C_4H_{10}O$. It reacts with metallic sodium liberating hydrogen.

(i) Write down the formula of three possible isomers of the compound which are similar and react with sodium.

(ii) What will be the product if any one of the isomers reacts with acetic acid ?

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1. Predict the species produced during heterolytic fission of the following:



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