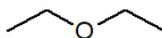


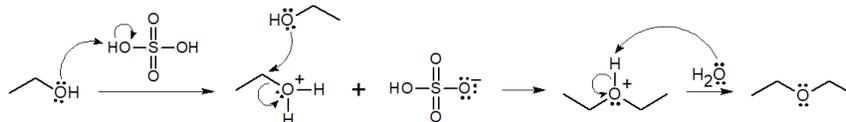
## 15.14: SOLUTIONS TO ADDITIONAL EXERCISES

### Industrial Synthesis of Ethers using Bimolecular Condensation

15-1:

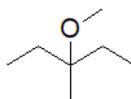


15-2:



### Synthesis of Ethers by Alkoxymercuration-Demercuration

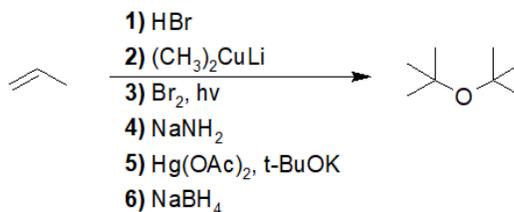
15-3:



3-methoxy-3-methylpentane

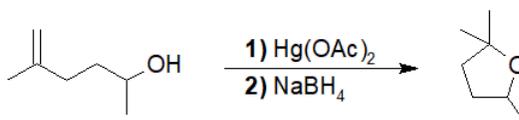
15-4:

Possible route of synthesis:

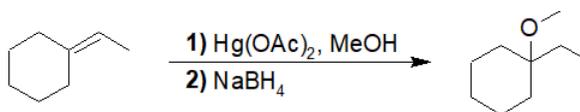


15-5:

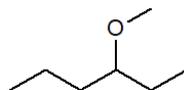
a)



b)



15-6:



### Cleavage of Ethers

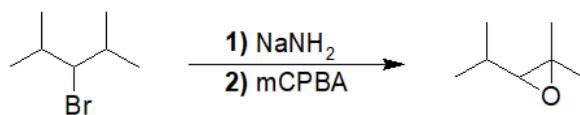
15-7:

Answer: C

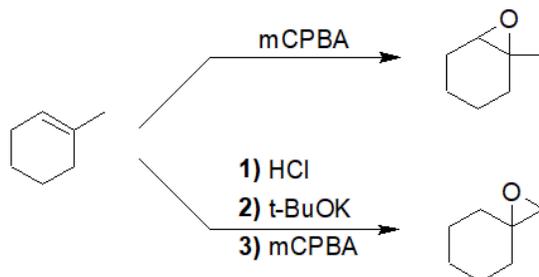
### Synthesis of Epoxides

15-8:

Answer: A



15-9:

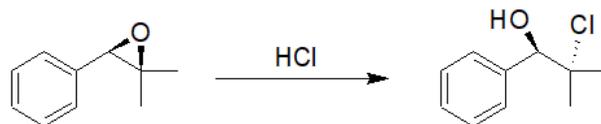


15-10:



**Reactions of Epoxides**

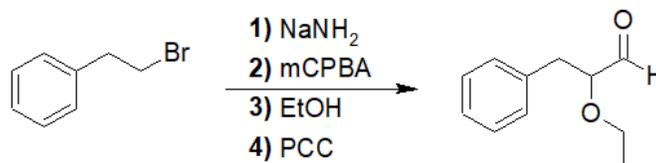
15-11:



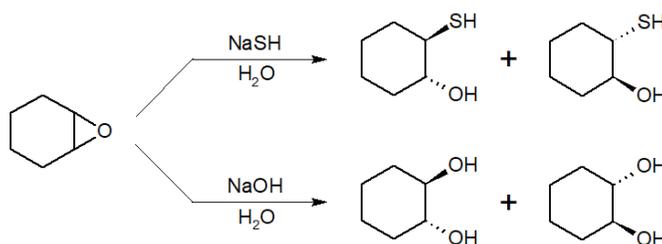
15-12:



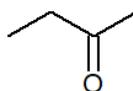
15-13:



15-14:



15-15:

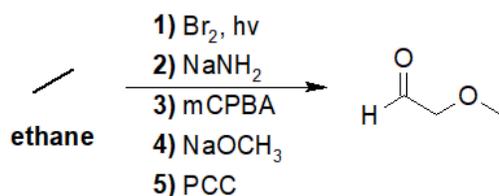


15-16:

Answer: D

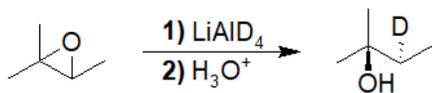
15-17:

Possible route of synthesis:

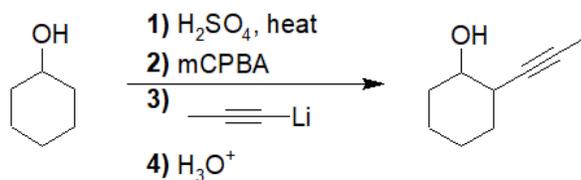


15-18:

a)

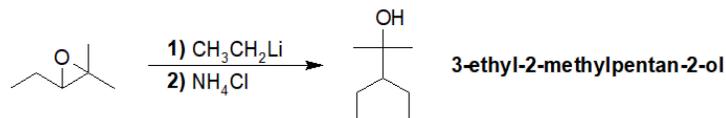


b)

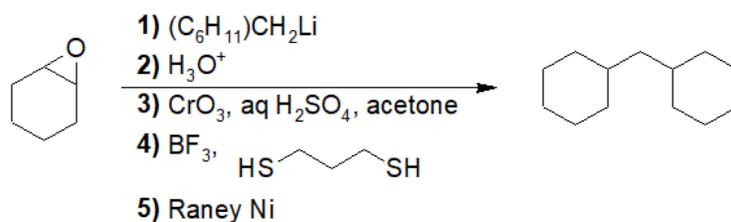


### Reactions of Epoxides with Grignard and Organolithium Reagents

15-19:



15-20:



15-21:

Answer: B

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