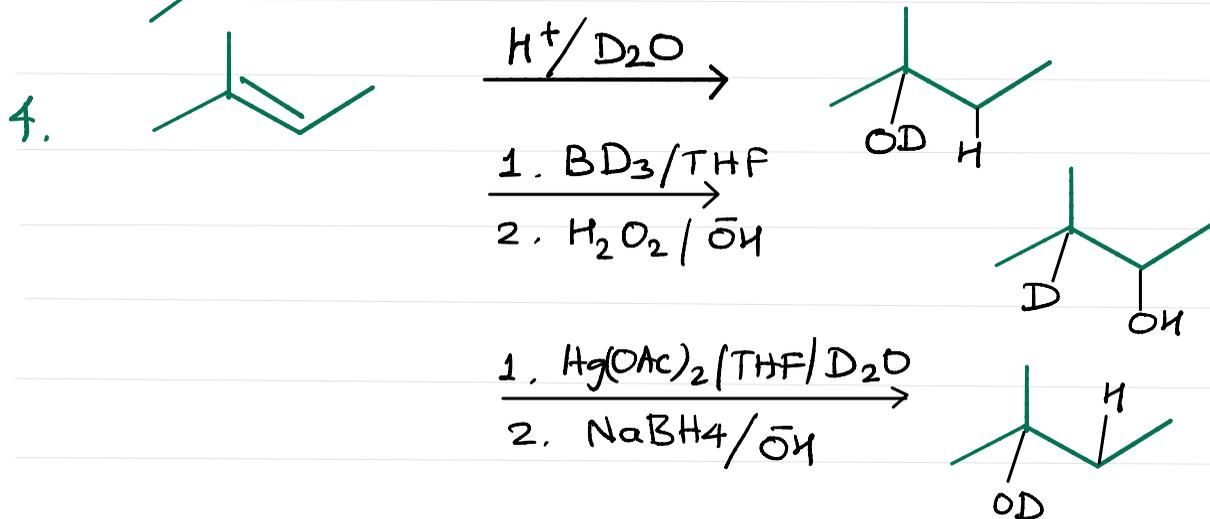
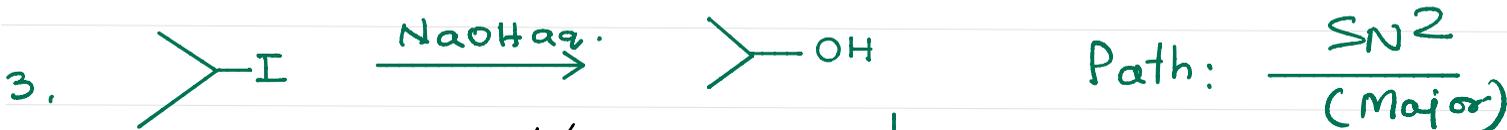
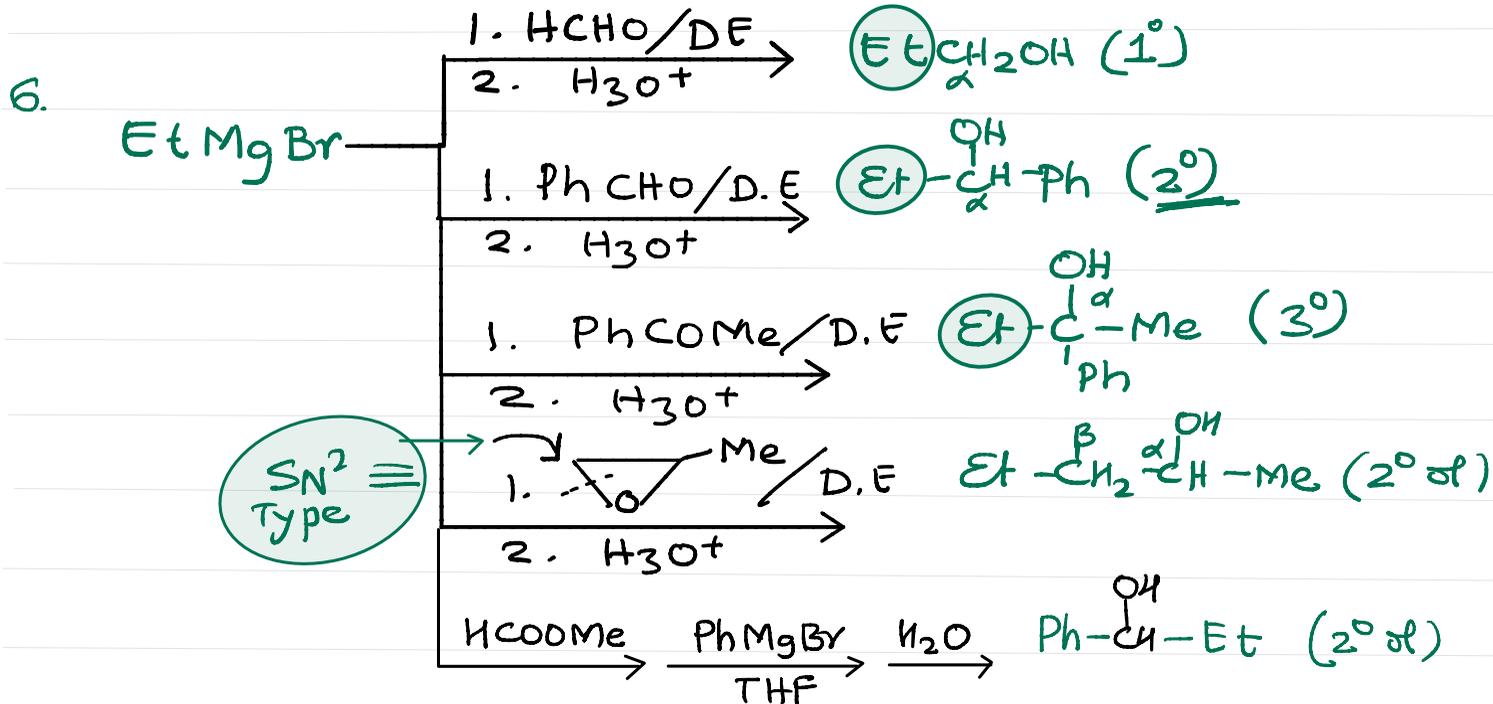
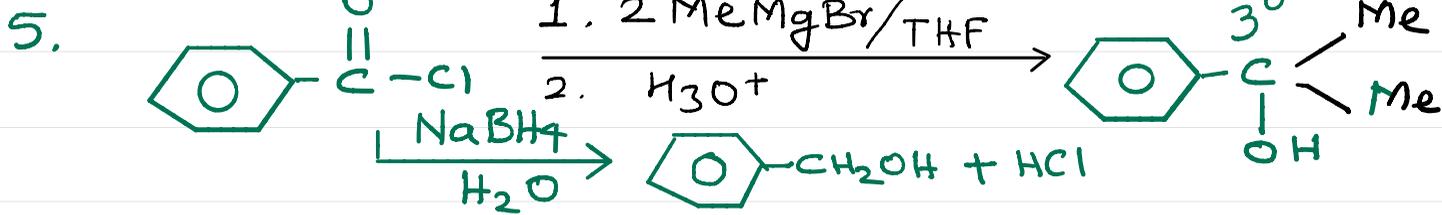


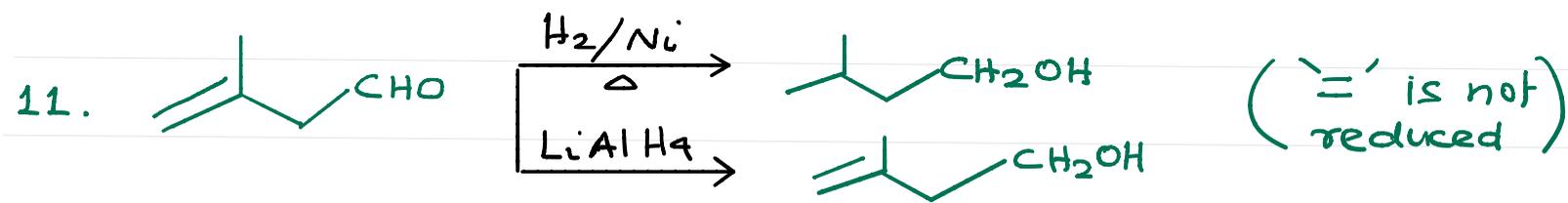
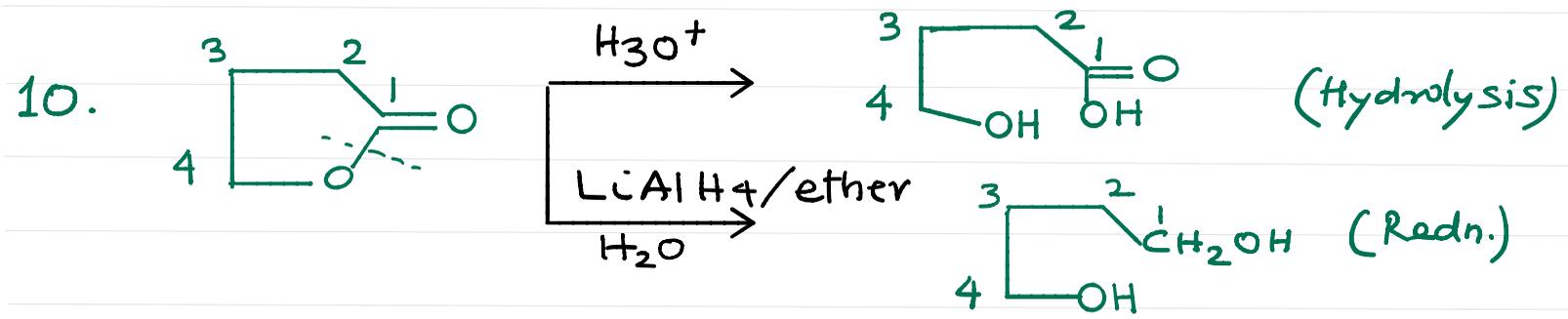
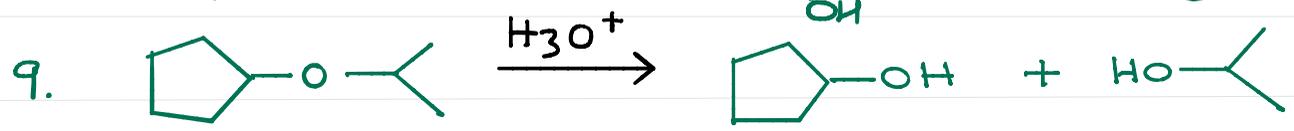
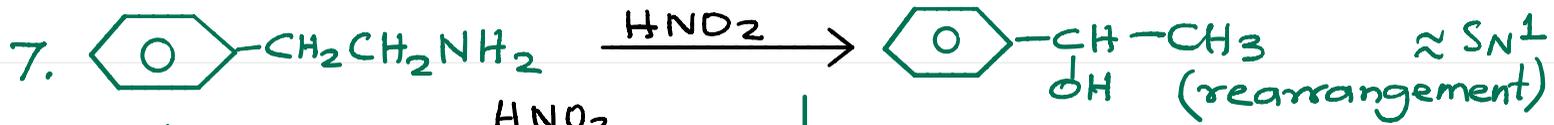
**Solutions to HWS-1
Home Worksheet-2**



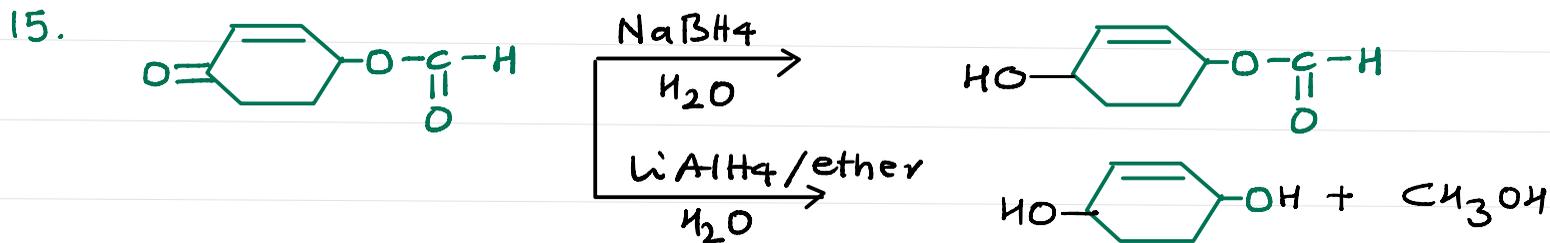
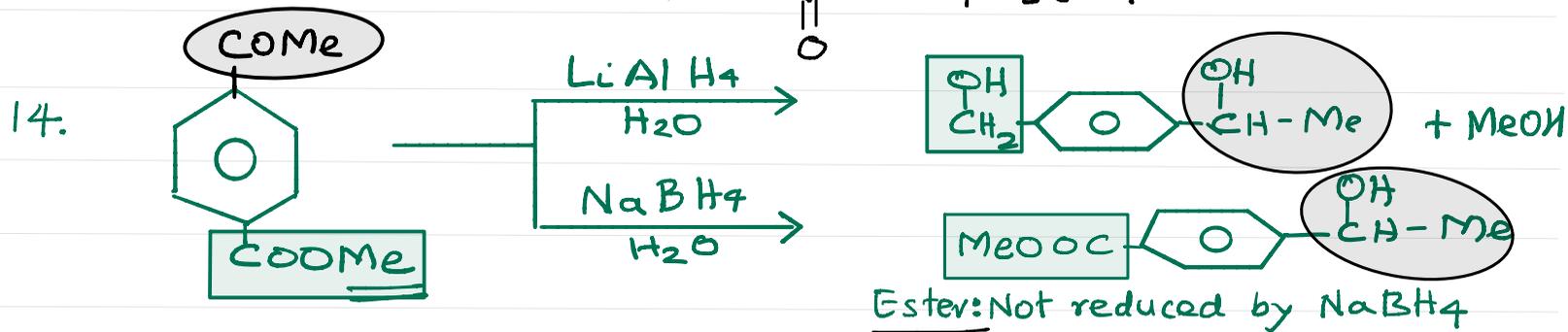
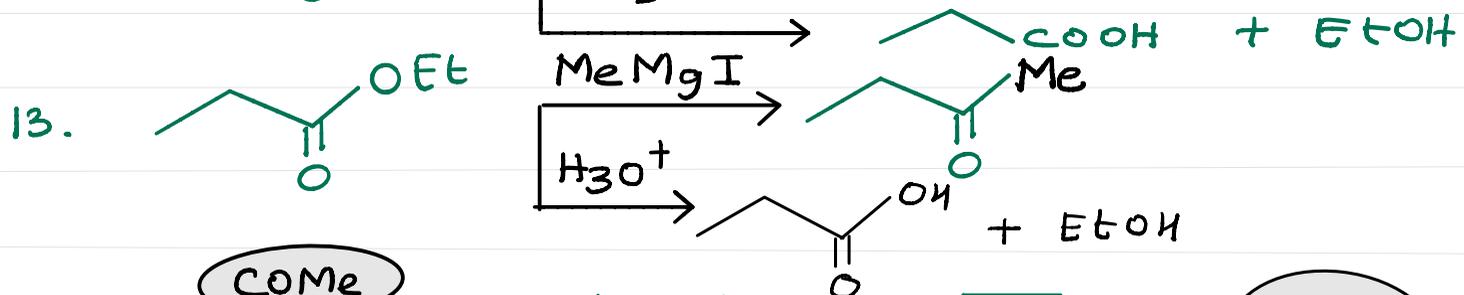
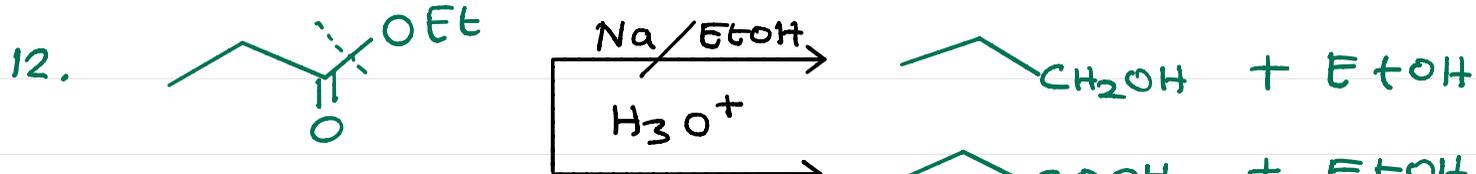
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

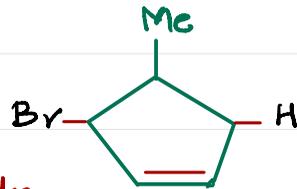
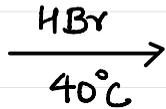
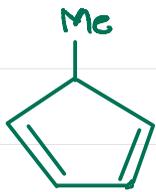


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

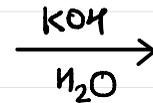


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

16.



conjugated diene \equiv 1,4 addn

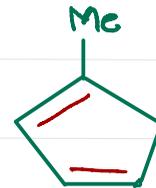


($\text{S}_{\text{N}}1$)
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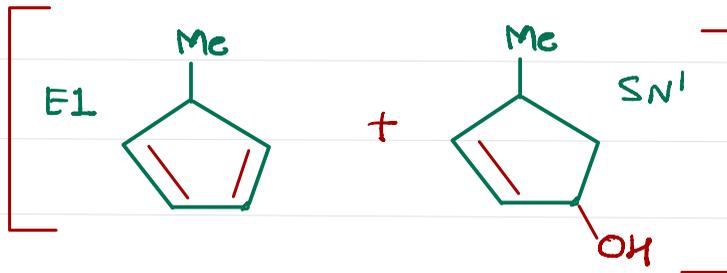


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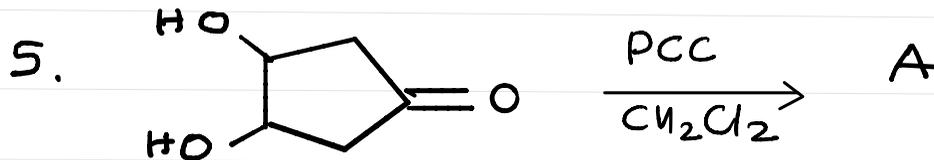
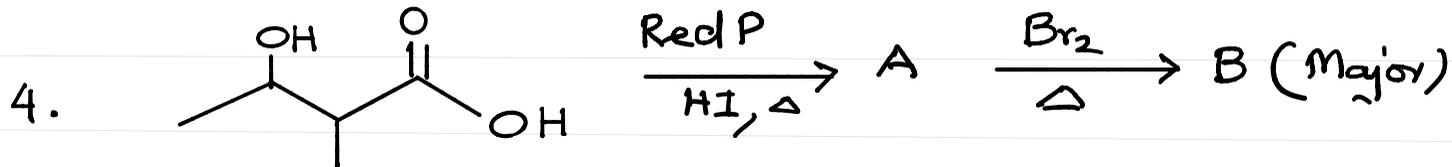
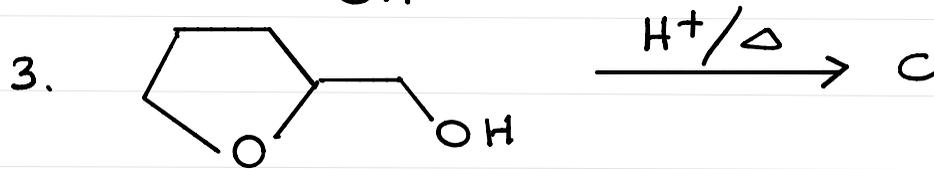
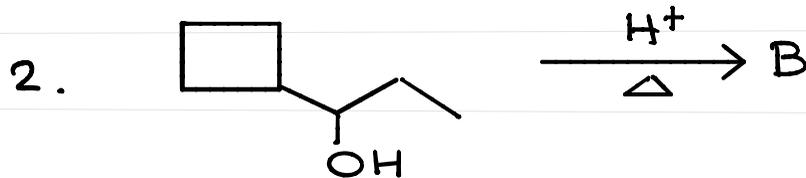
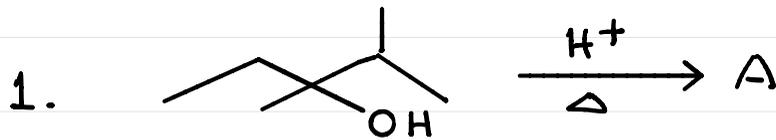
E1



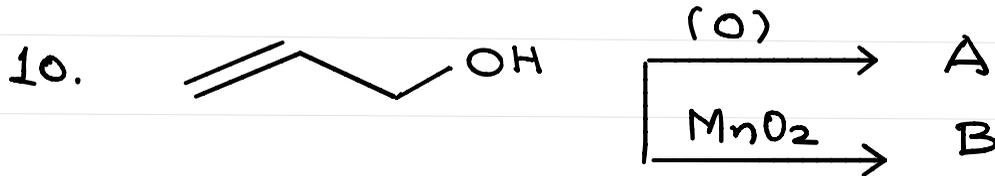
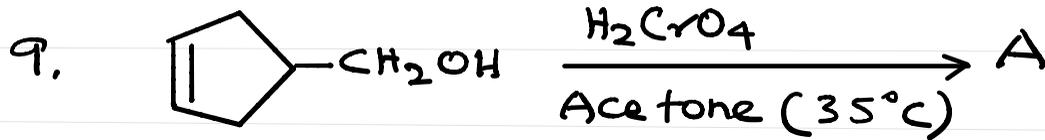
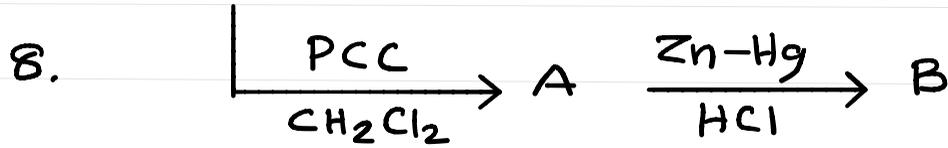
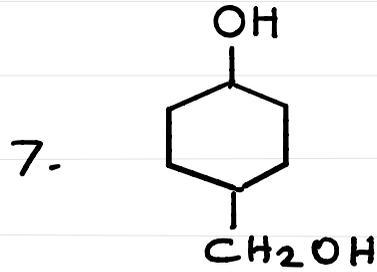
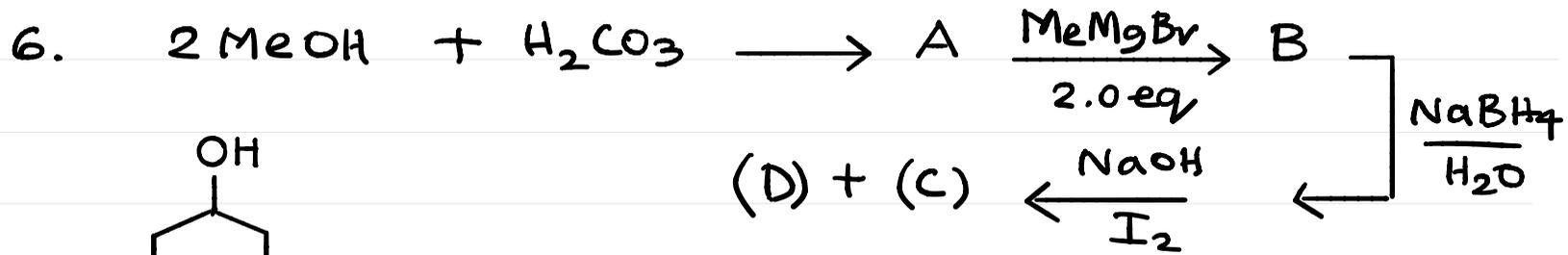
+

Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

Identify the products A, B, c.....

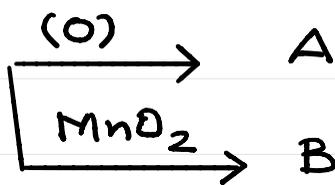
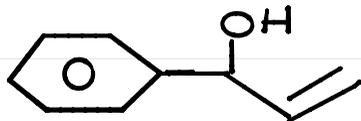


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

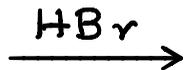
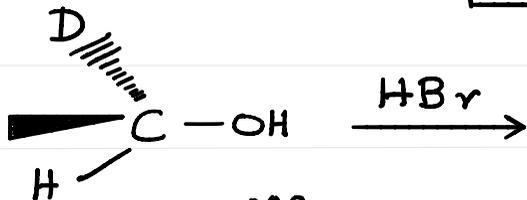


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

11.

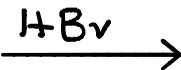
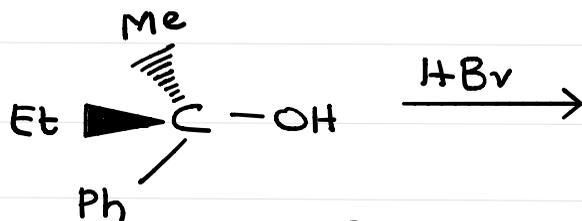


12.



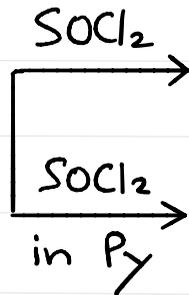
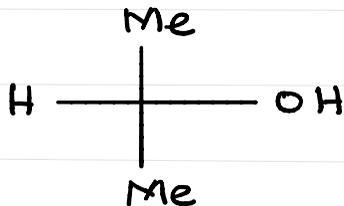
Path: _____

13.



Path: _____

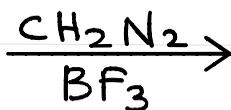
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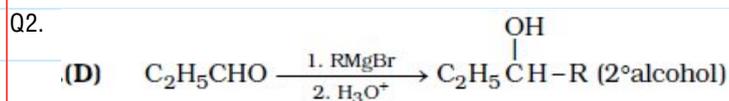
15.



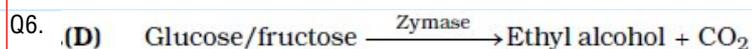
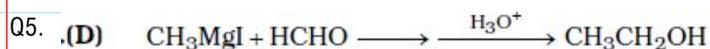
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

Answers & solutions to H.W based on Preparation of ALCOHOLS

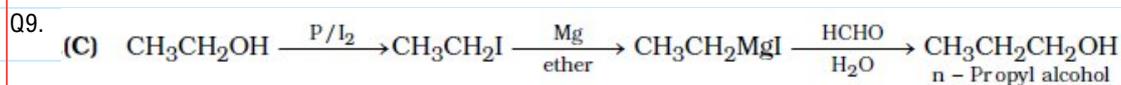
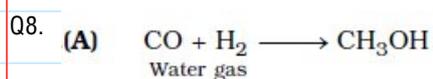
Q1. (A) Anti-Markovnikov's rule



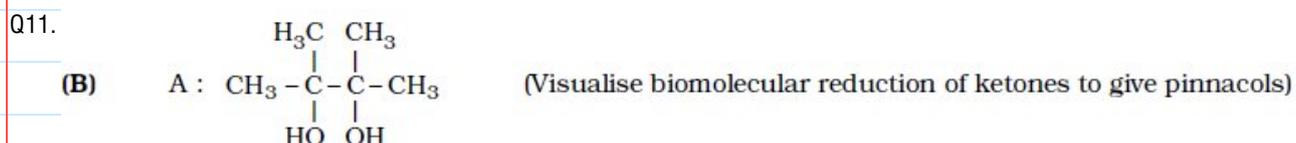
Q3. (C) Acid catalysed hydration follows Markovnikov's rule and that is formed from most stable carbocations. The stability of carbocations follows : $3^\circ > 2^\circ \gg 1^\circ$



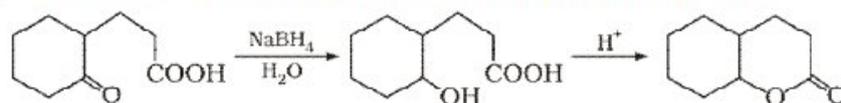
Q7. (B) LiAlH_4 /ether does not reduce $> \text{C} = \text{C} <$ bond



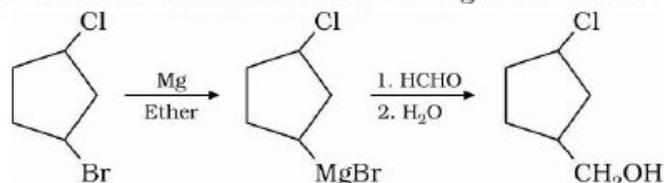
Q10. (C) Grignard reagents are stable in ether as they don't have acidic hydrogen like alcohols and water. Grignard reagent act as nucleophile with electrophilic substrates like esters, aldehydes, ketones and cyanides.



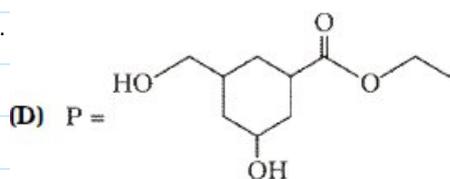
Q12. **(D)** NaBH_4 reduces only carbonyl group, not carboxylic acids and esters.



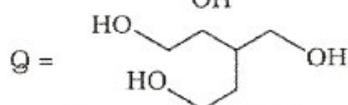
Q13. **(B)** RBr is more reactive than RCl as bond is longer and weaker.



Q14.



[NaBH_4 does not reduce ester group to give alcohols]



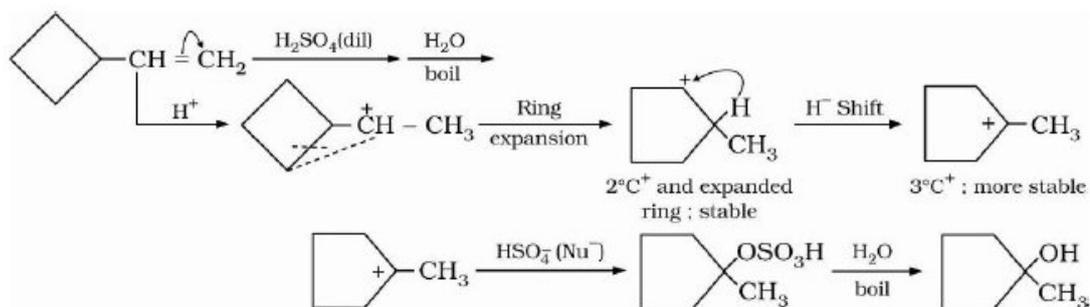
[LiAlH_4 reduces aldehyde, ketones, acids & esters to alcohols]

So there are 2 alcoholic groups in P and 3 in Q.

Q15. **(C)** Rate of hydration of alkenes \propto stability of initial carbocation formed after Electromeric effect.

Q16. **(ABC)** **(D)** $n\text{-BuMgI} + \text{CH}_3\text{COCH}_3 \longrightarrow 2\text{-Methylhexan-2-ol}$ (Incorrect)

Q17. **(D)**

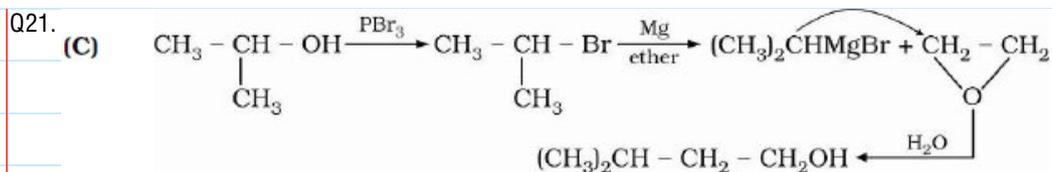


Q18. **(ACD)** (B) amides are reduced to amines.

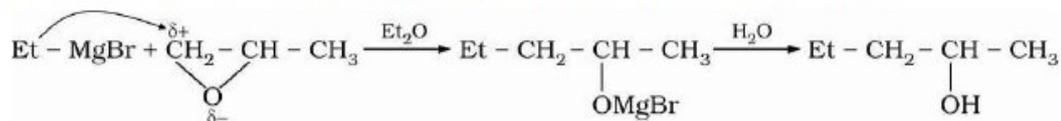
(C) H^- from LiAlH_4 does base catalysed ring opening in methyl oxirane to form 2° alcohol.

Q19. **(AC)** LiAlH_4 reduces aldehydes/ketones as well as esters. NaBH_4 reduces only aldehydes/ketones but not esters.

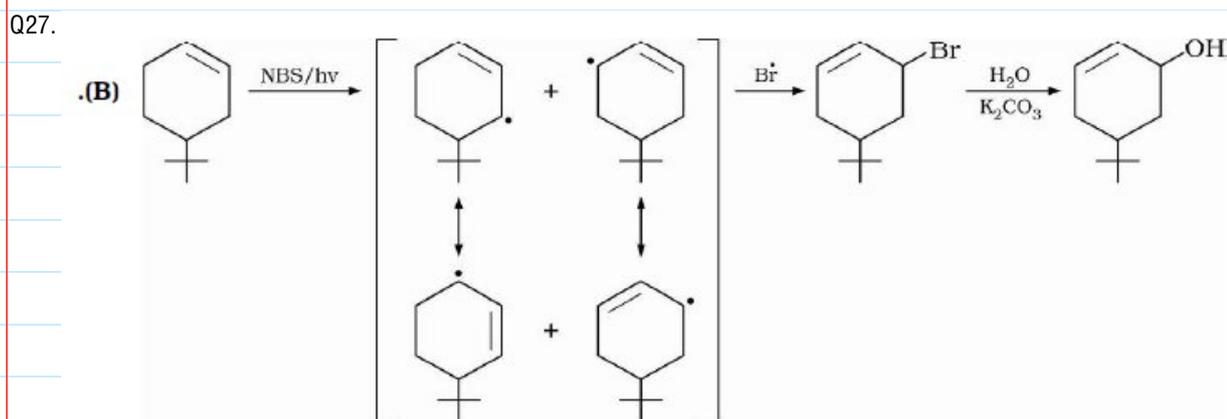
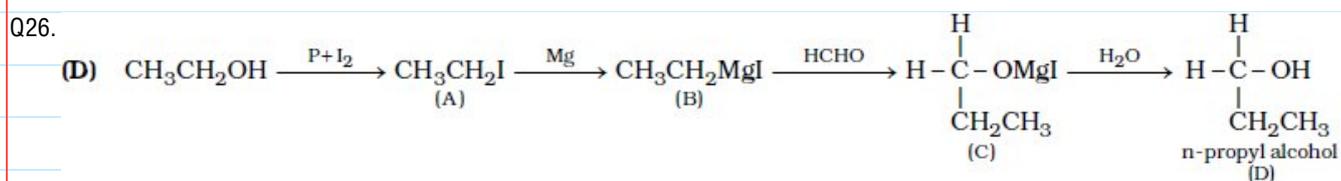
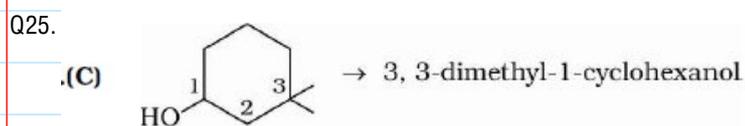
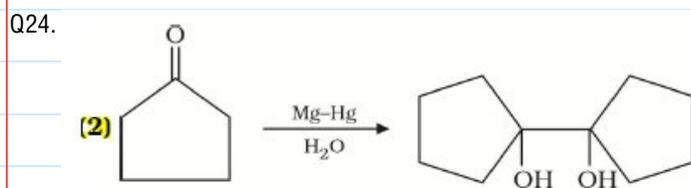
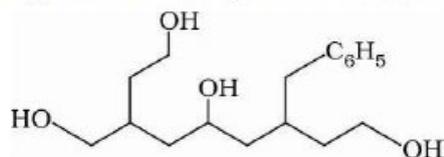
Q20. **(ABC)**



Q22. (C) Visualise base (Nu^-) catalysed ring opening i.e., consider steric factors.



Q23. (ABCD) MnO_2 oxidise only allylic and benzylic alcohols.



Thank
you!

