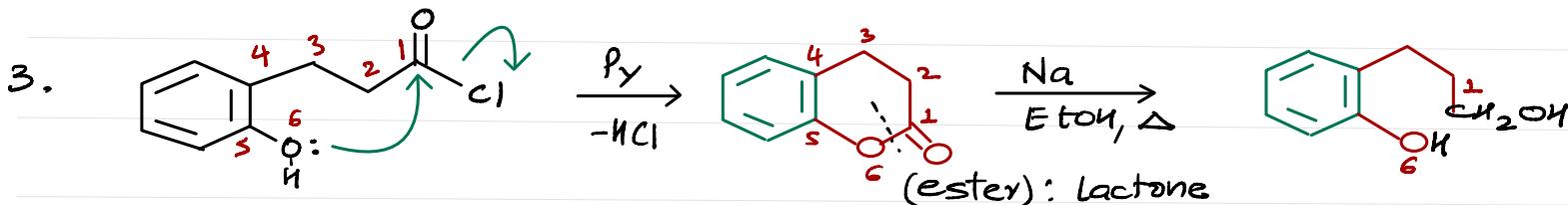
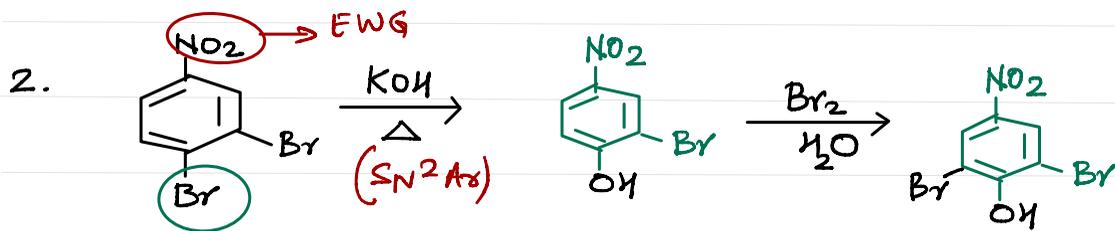
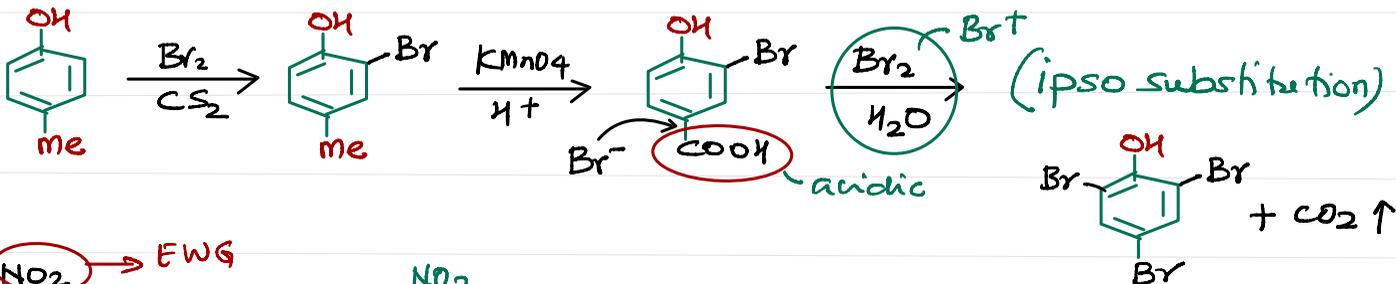
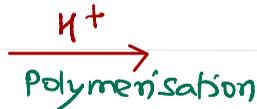
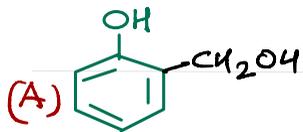
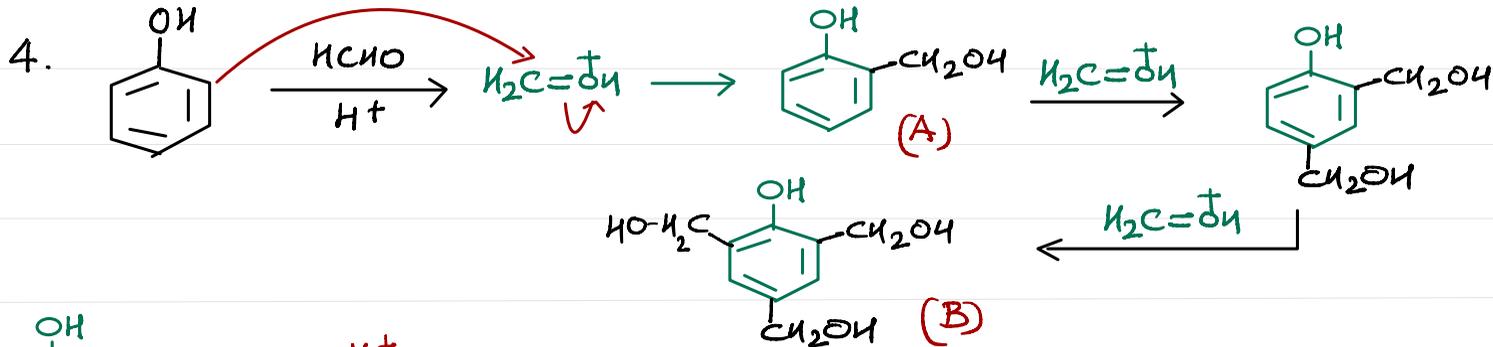


**Solutions to HWS-7
Home Worksheet-8**

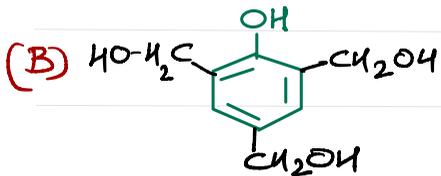


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

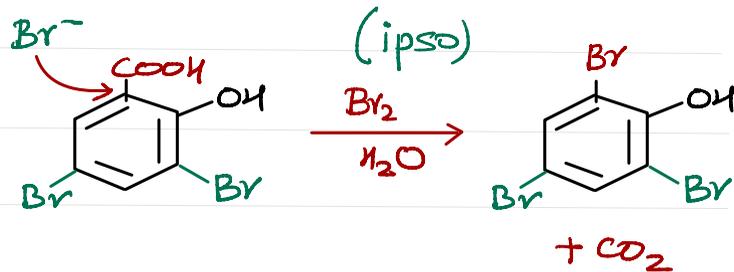
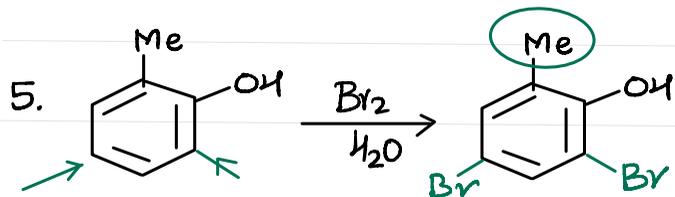


Novolac

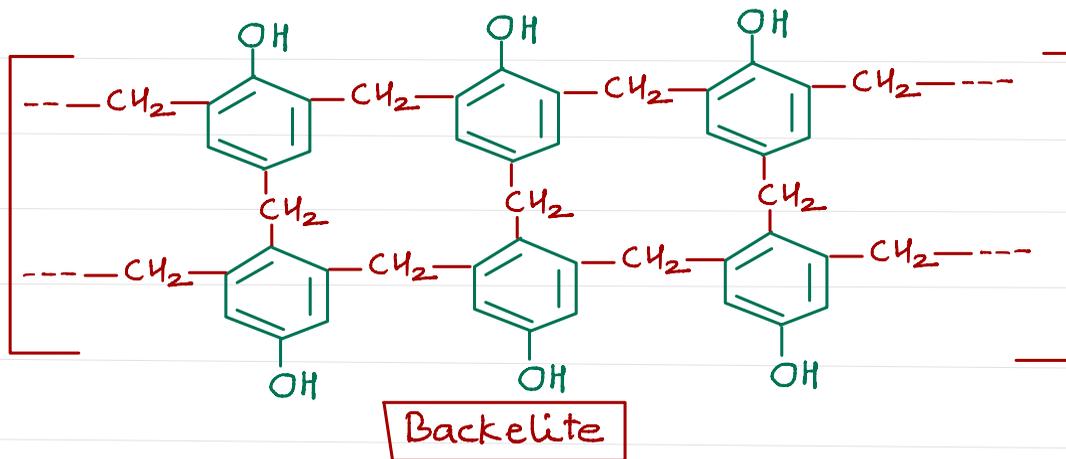
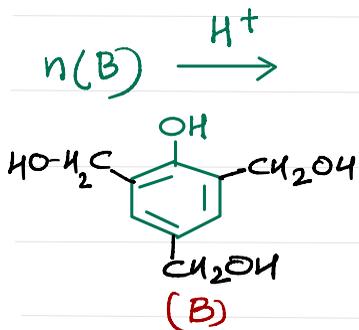
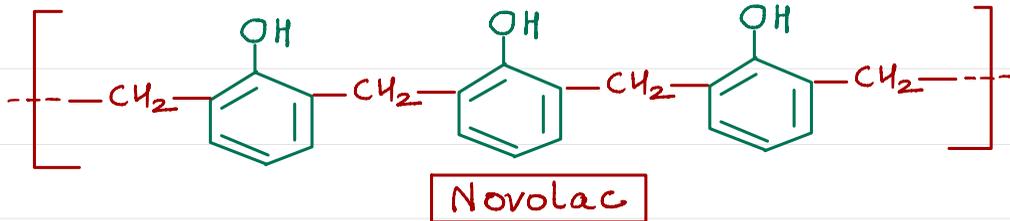
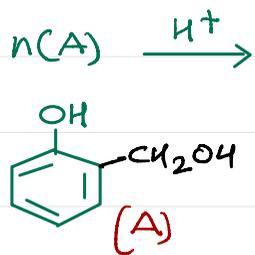
See structure on Next page



Bakelite



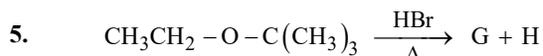
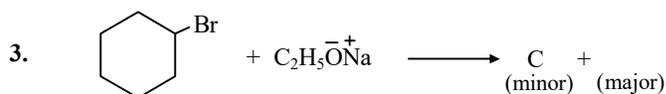
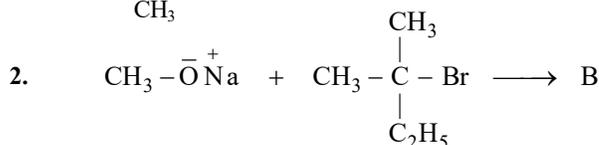
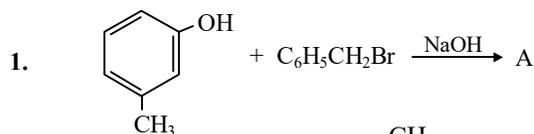
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



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

75 - 90 min

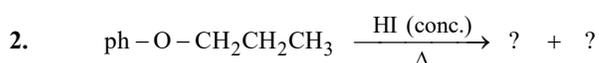
I. Identify A, B,



II. Do the following conversions.

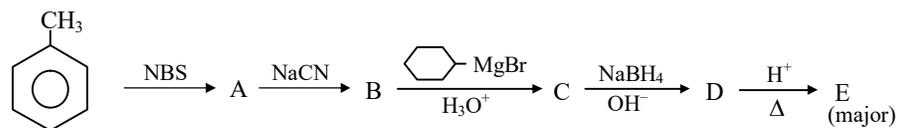
- 1, 3-butadiene to cyclohexane oxide in not more than 3 steps.
- Isopropyl chloride to 2-methyl oxirane.
- Cyclopentyl bromide to methoxy cyclopentane.
- Cyclohexene to cis-1, 2-dimethoxy cyclohexane.
- Isopropyl alcohol to 2, 3-dimethyl butan-2, 3-diol

III. Write the products of the following reactions and propose a mechanism to support your answer.

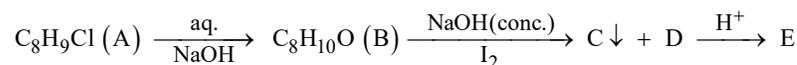


IV. An organic compound ($\text{C}_4\text{H}_{10}\text{O}_3$) shows properties of both ethers and alcohols. When treated with excess of HBr, it yields 1, 2-dibromo ethane. Give the structure of compound.

V. Identify A, B, C.

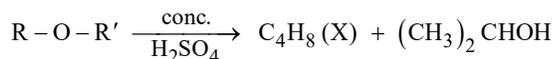


VI. Identify A, B, C.

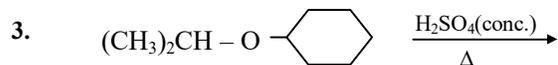
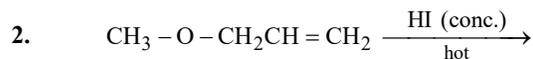


E is soluble in hot water and insoluble in cold water.

VII. Identify R, R' and X.



VIII. Give the products in each case.



IX. An organic compound X, on reaction with CHCl_3 and KOH gives a mixture of Y and Z; Both of Y and Z give same compound T when distilled with zinc. T on oxidation gives S, $\text{C}_7\text{H}_6\text{O}_2$. The sodium salt of S on heating with soda-lime gives P, which can also be obtained by distilling X with zinc. Identify all the unknown compounds (X, Y, . . .)

X. An organic compound (A), $\text{C}_5\text{H}_{12}\text{O}$ on reaction with PCl_5 forms alkyl chlorides B and C. Both B and C on reaction with aq. KOH form D and E. Both D and E give positive iodoform test. Identify the compounds A to E.

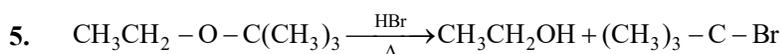
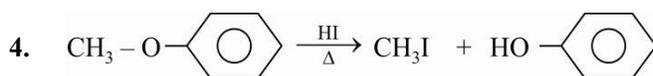
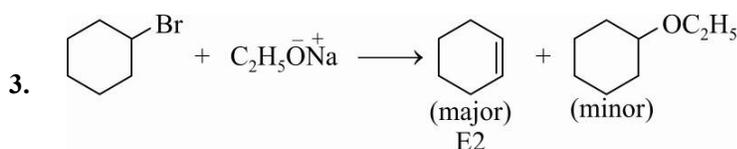
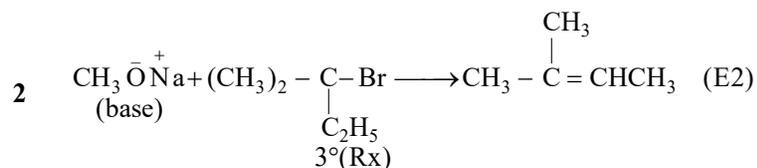
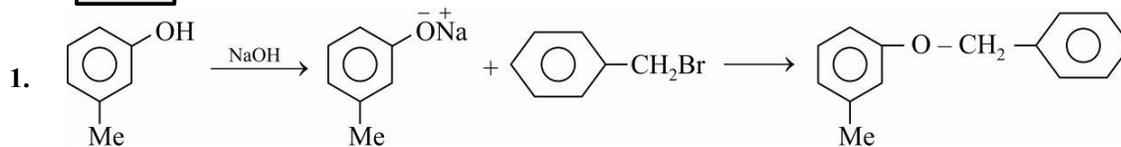
Solutions on Next Page



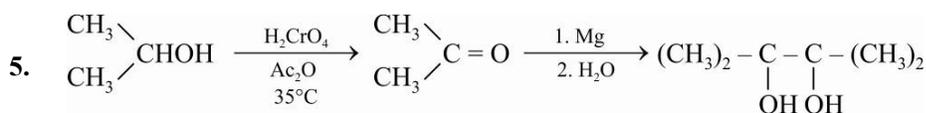
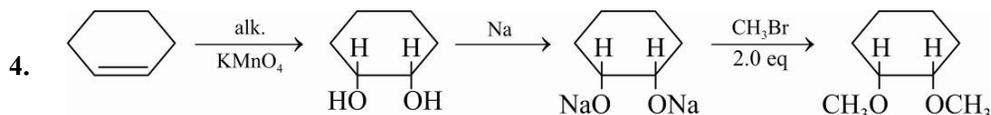
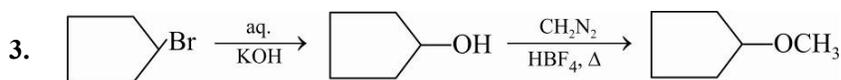
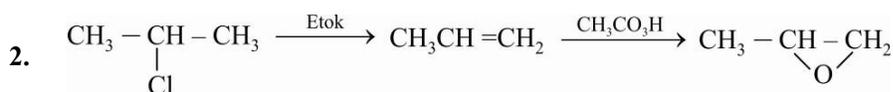
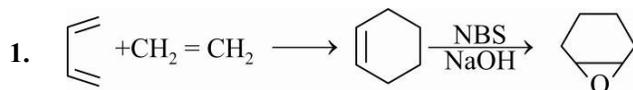
I

Class Test - 2

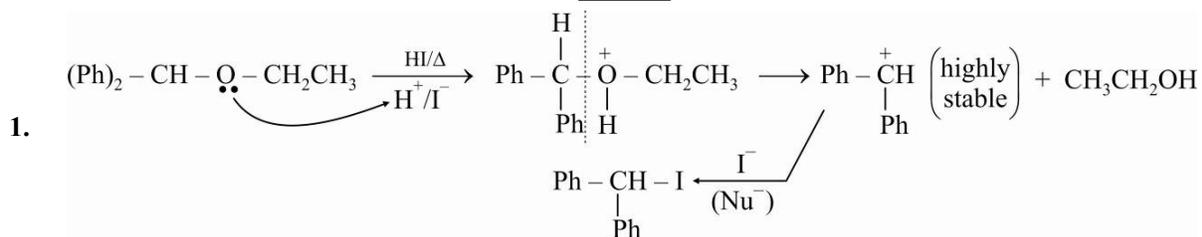
SOLUTIONS

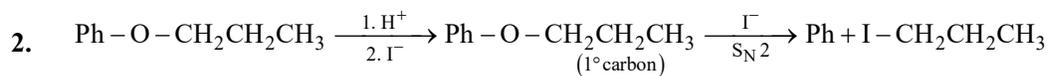


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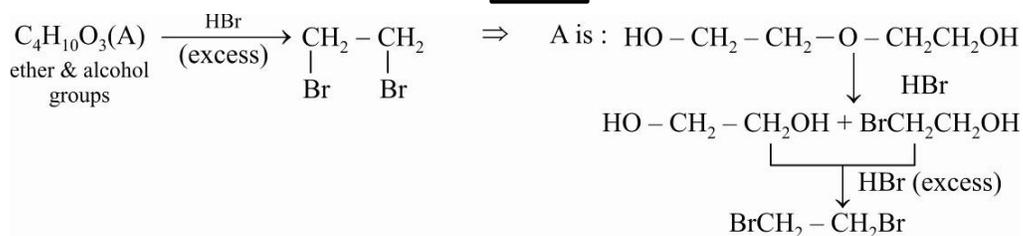


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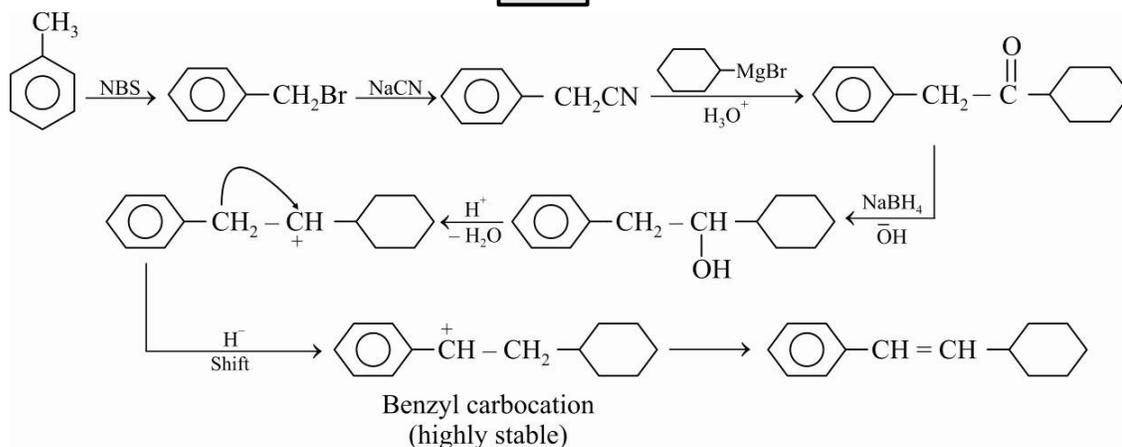




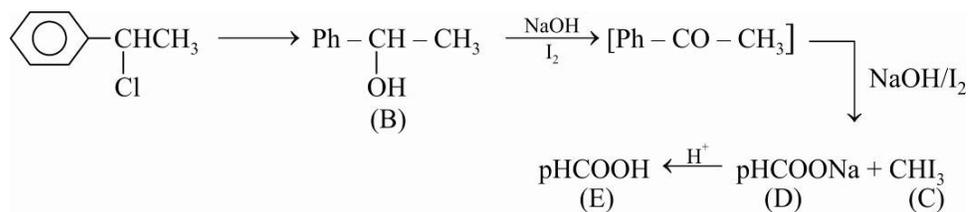
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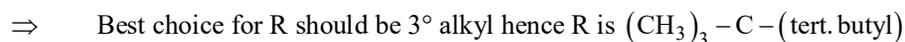
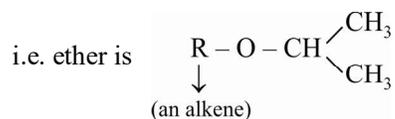
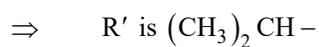
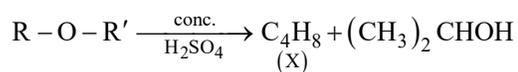
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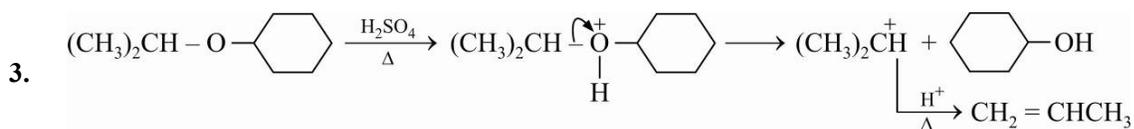
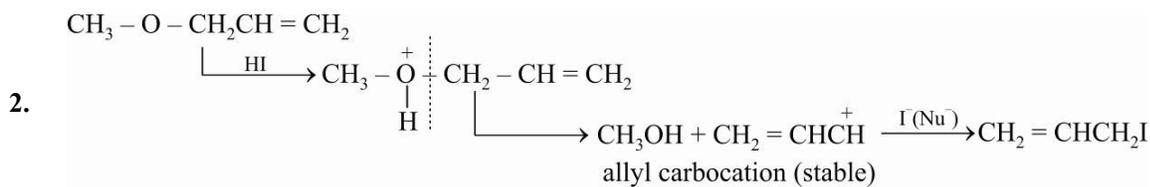
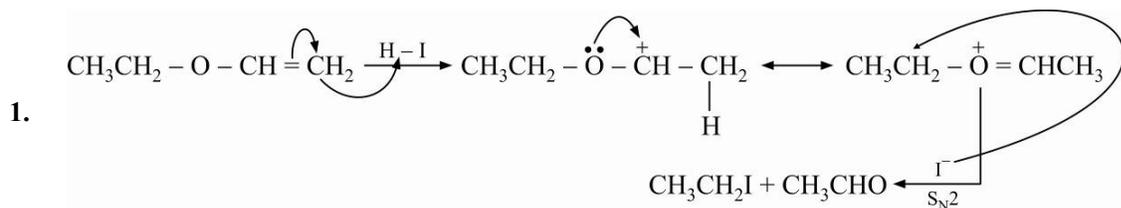
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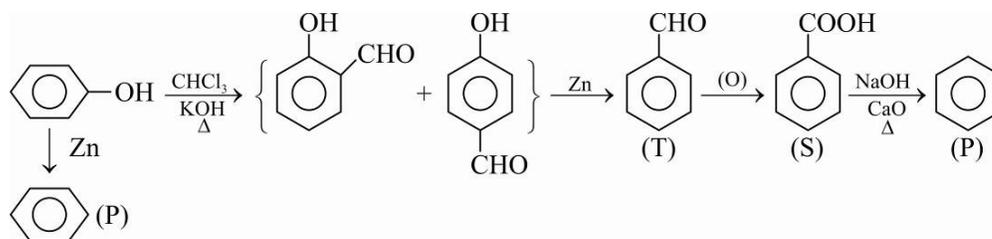
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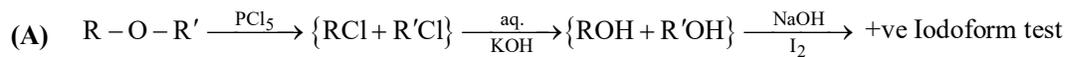
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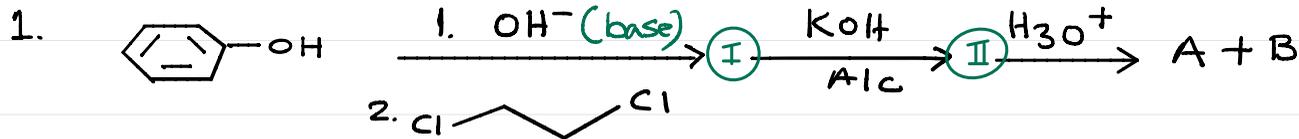


IX



X





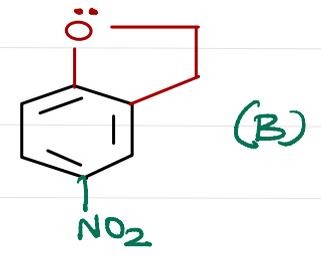
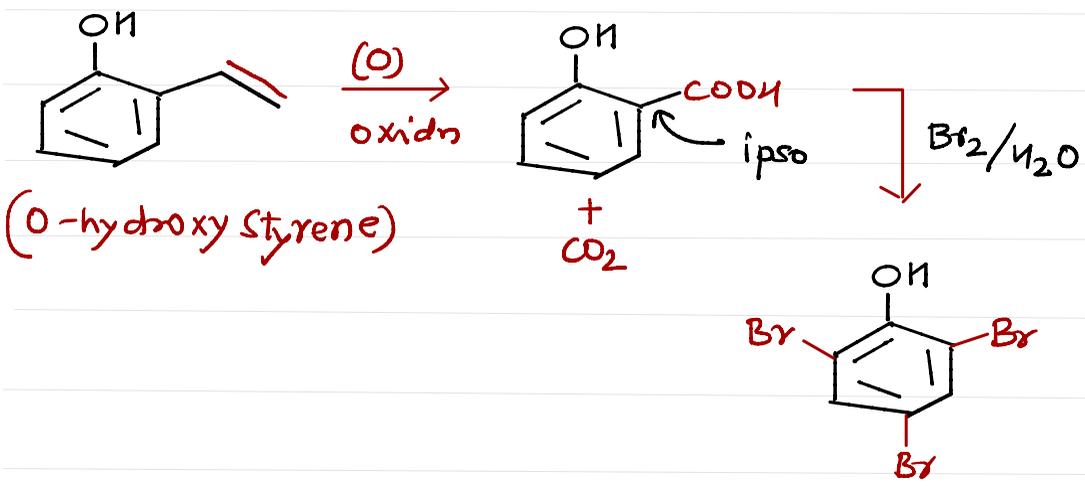
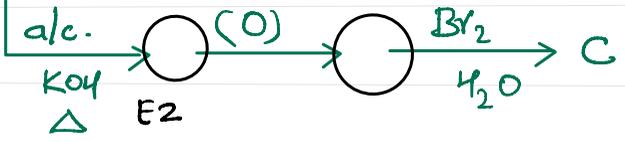
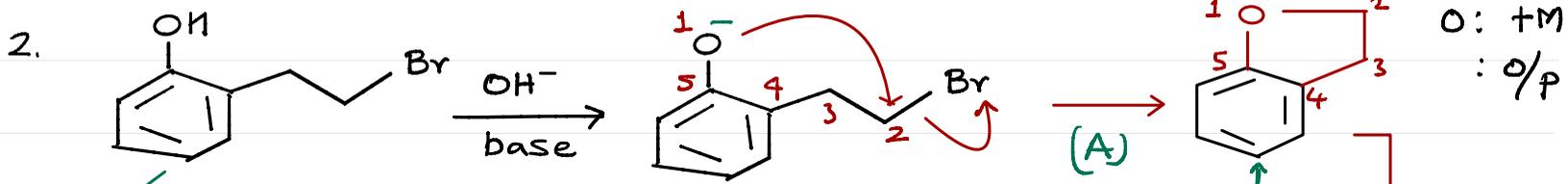
vinyl alcohol



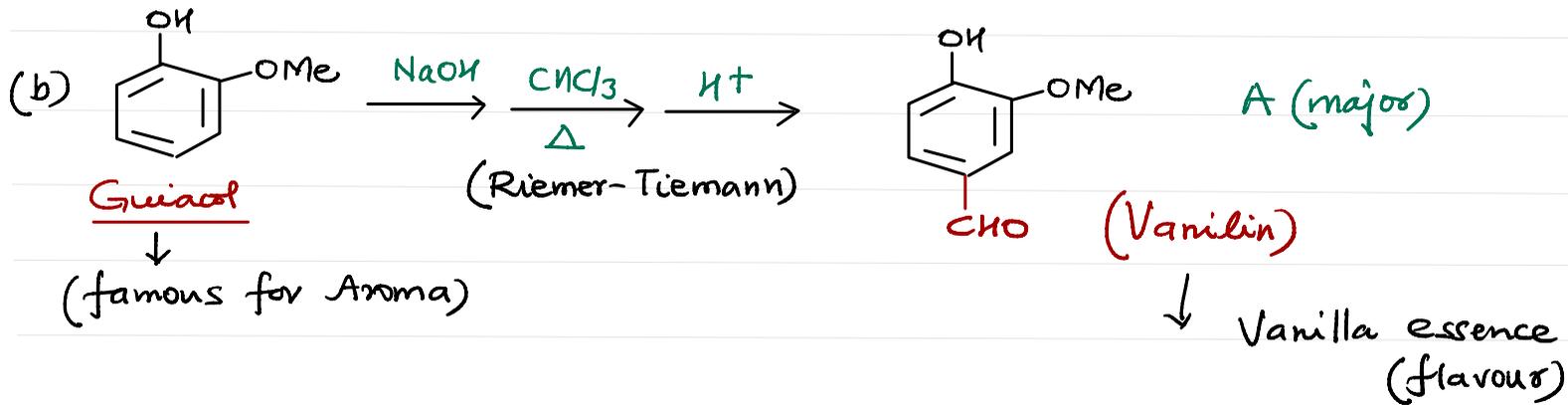
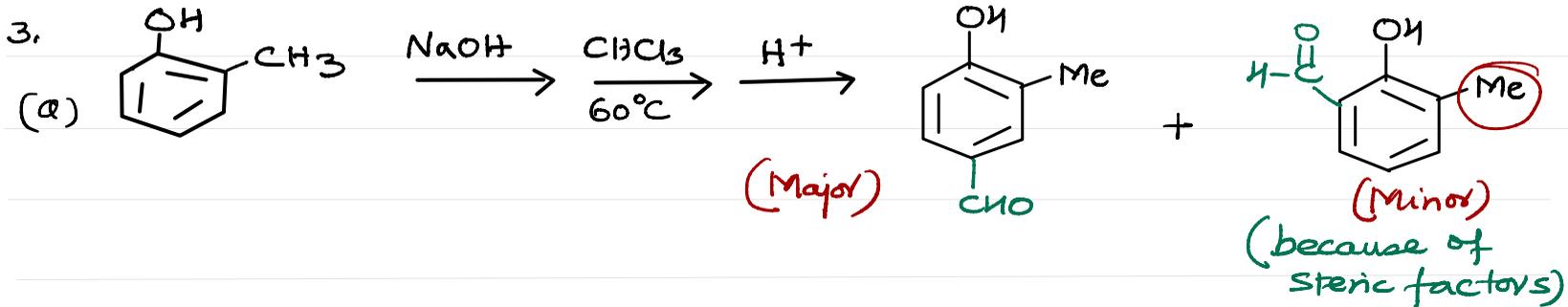
Phenyl vinyl ether



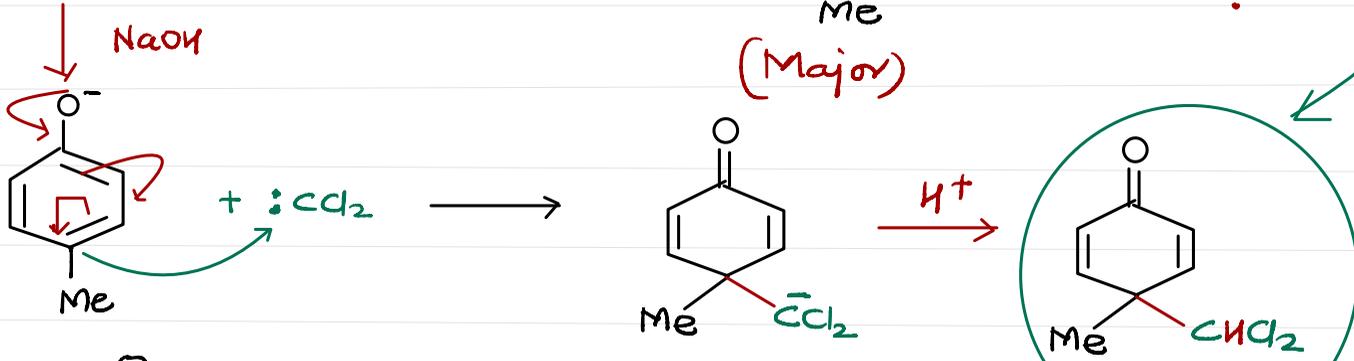
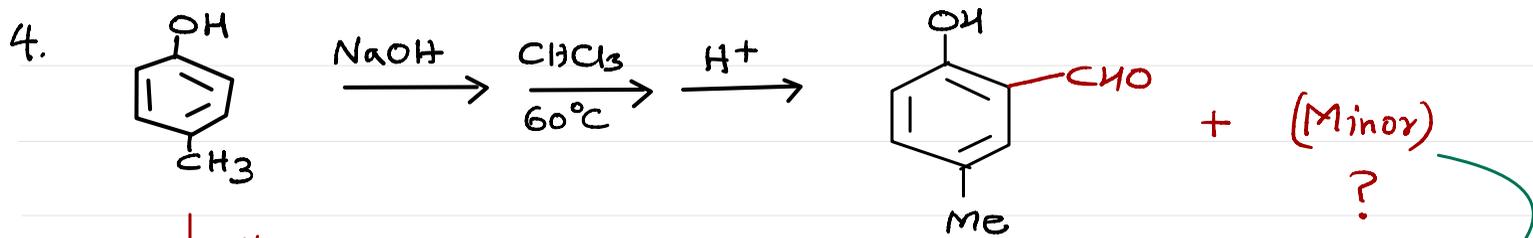
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



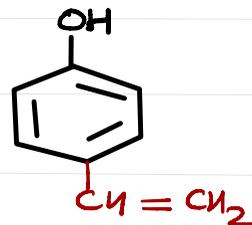
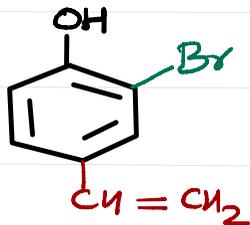
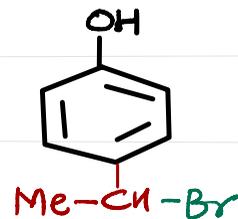
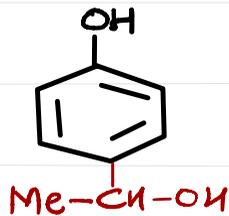
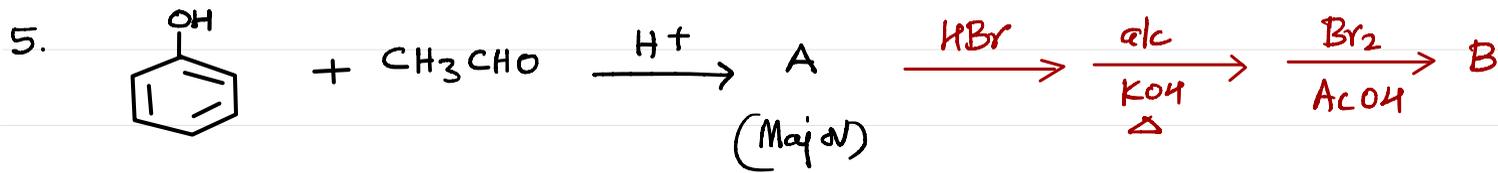
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



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



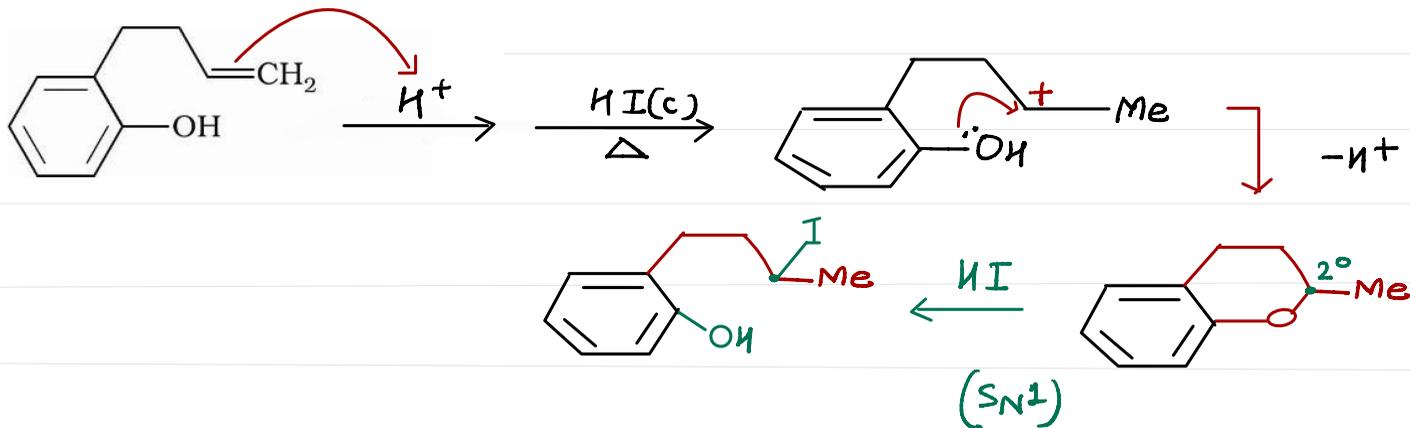
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



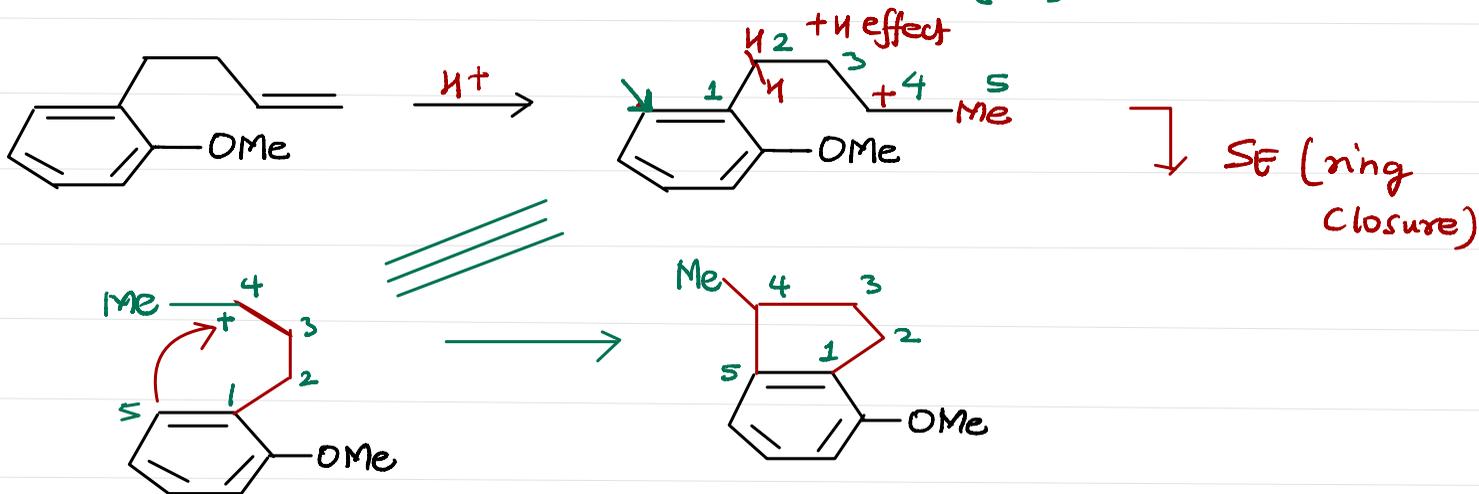
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

6.

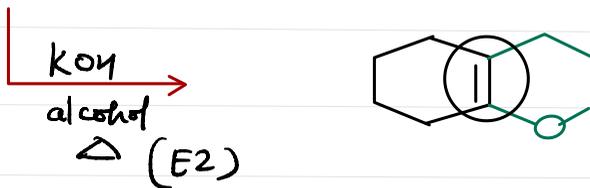
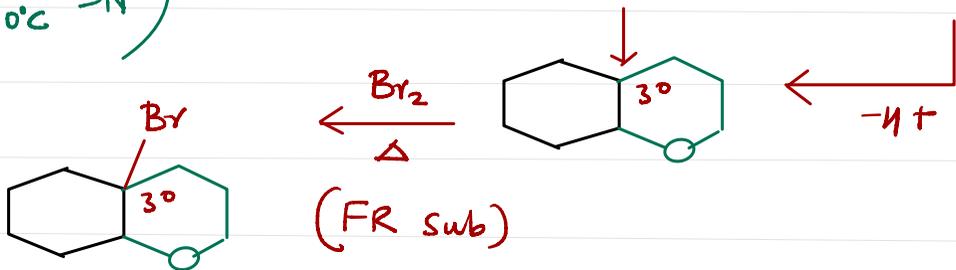
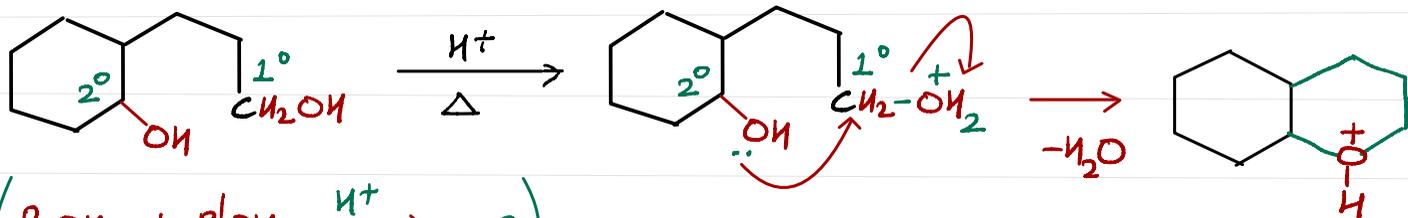
(a)



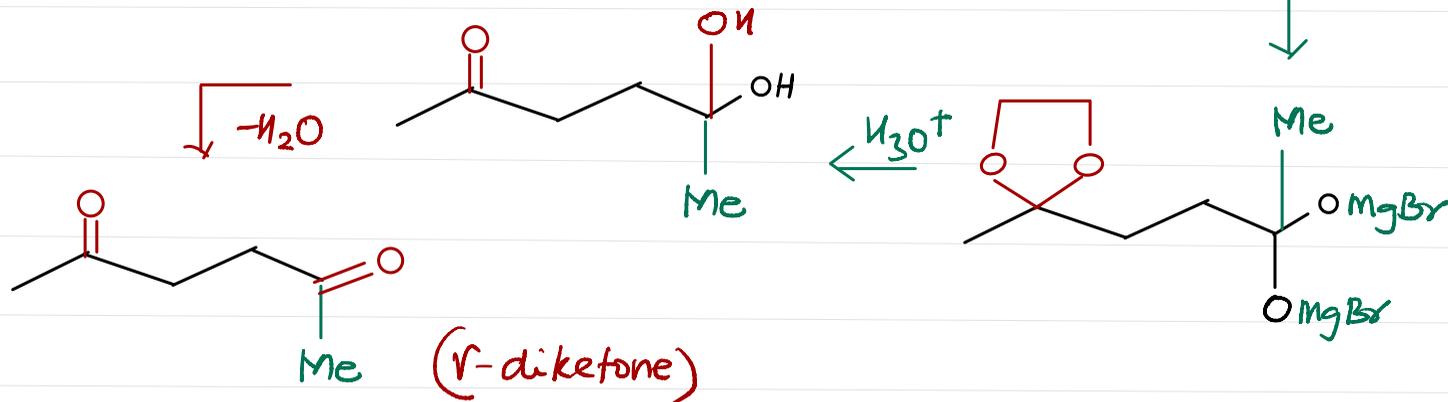
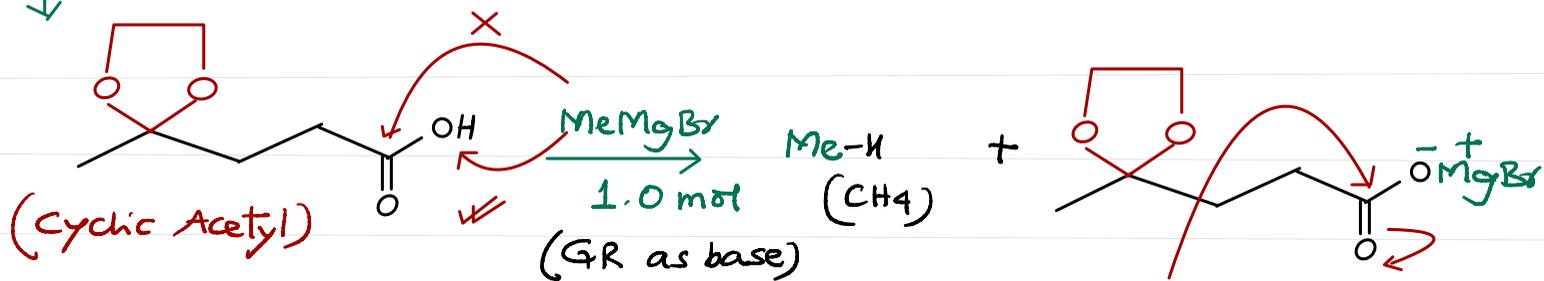
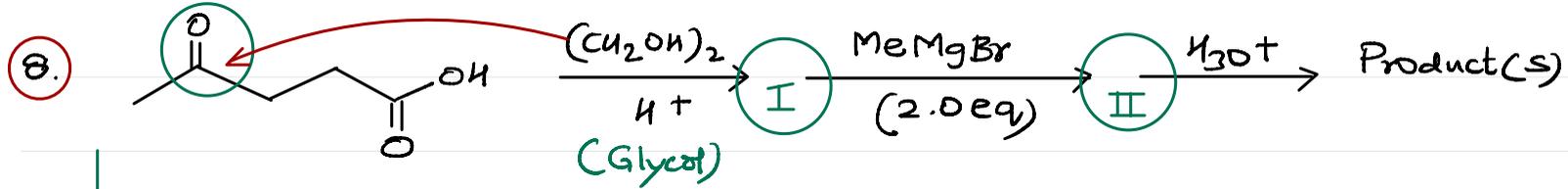
(b)



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

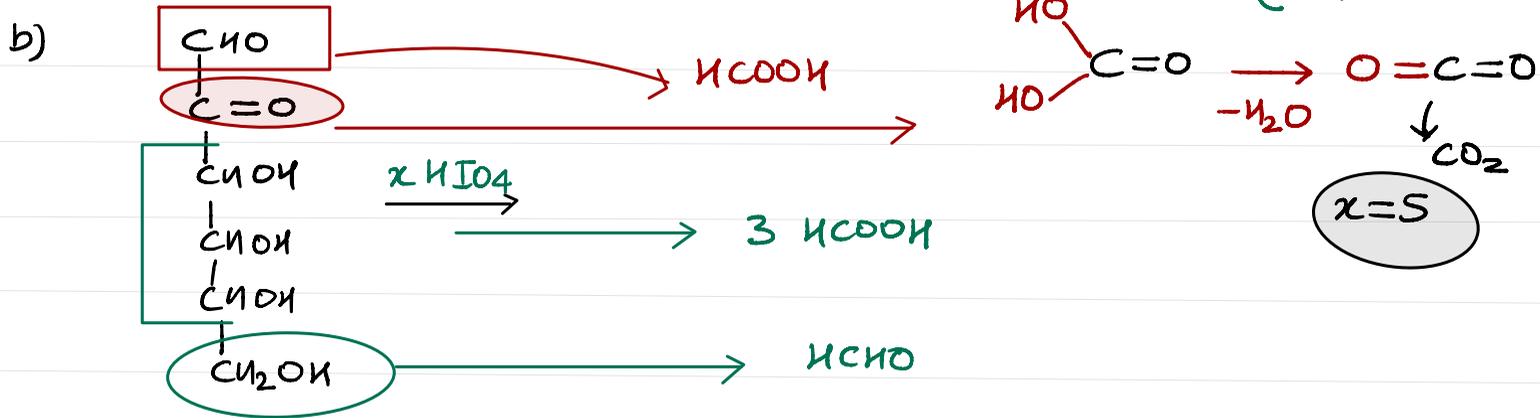
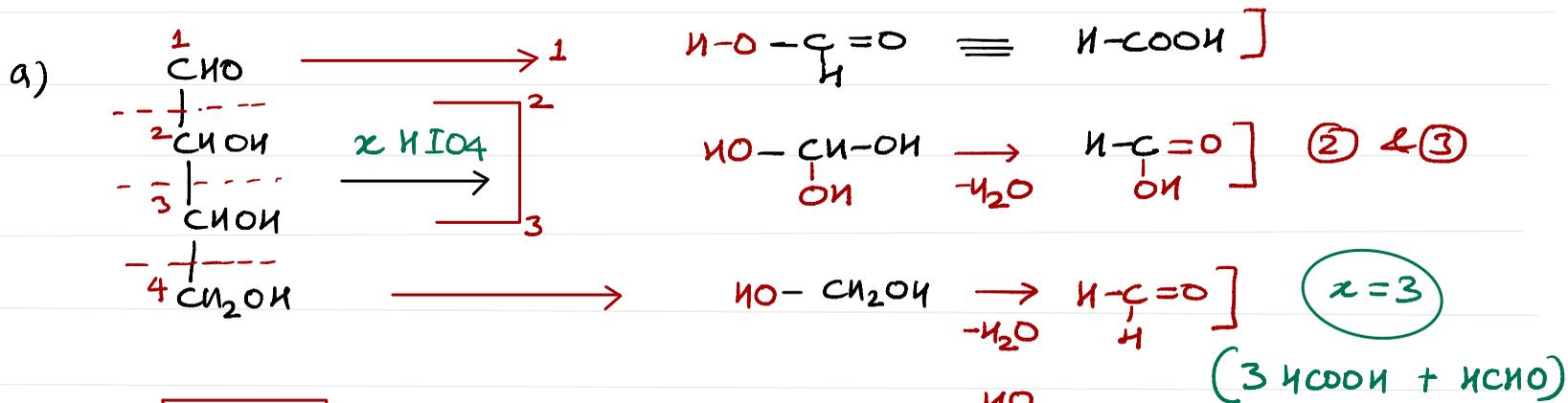


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)



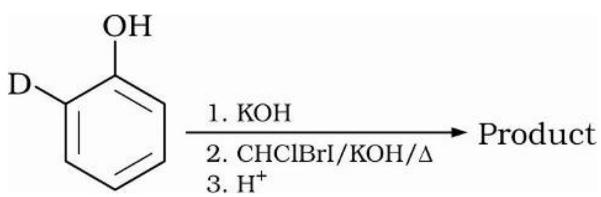
Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

9. Visualise the products in each of following & find value of x.

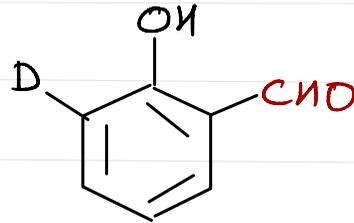
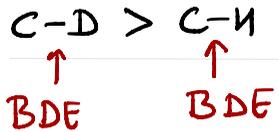
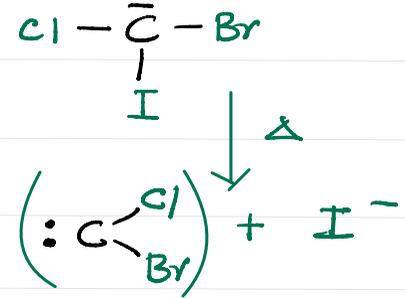
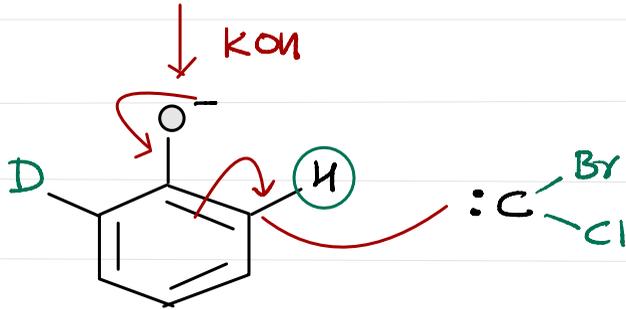
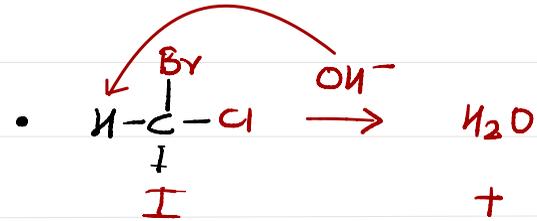


Alcohol(s), Phenol(s), Ether(s) and Glycol(s)

10.

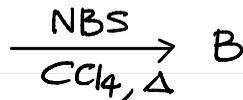
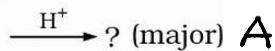
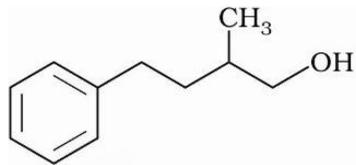


(Visualise mechanism)



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

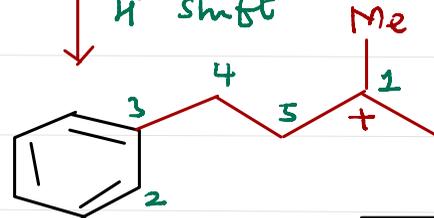
11.



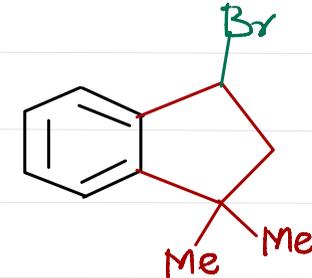
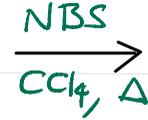
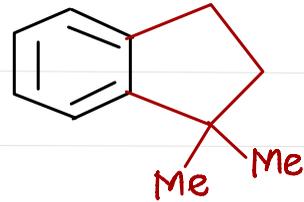
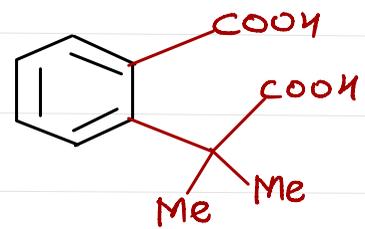
1. (O)

2. LiAlH₄/ ether
H₂Oconc. H₂SO₄
Δ

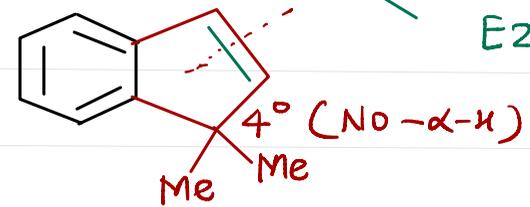
D

1. H⁺
2. -H₂OH⁻ shift

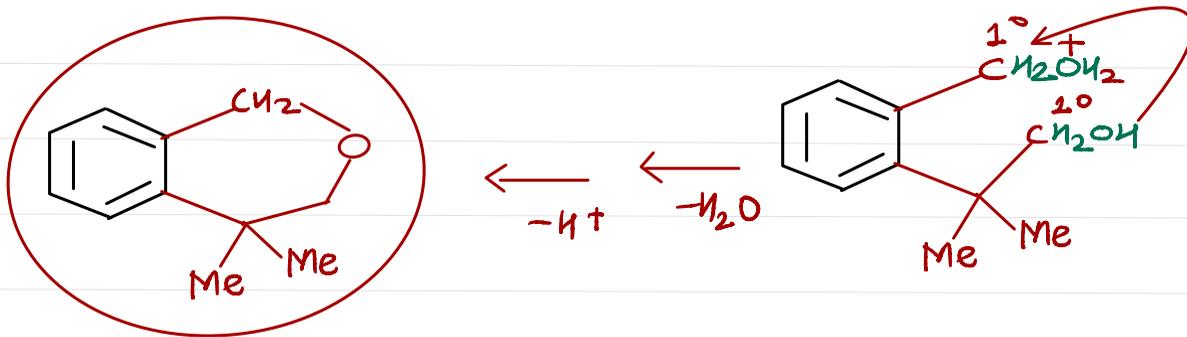
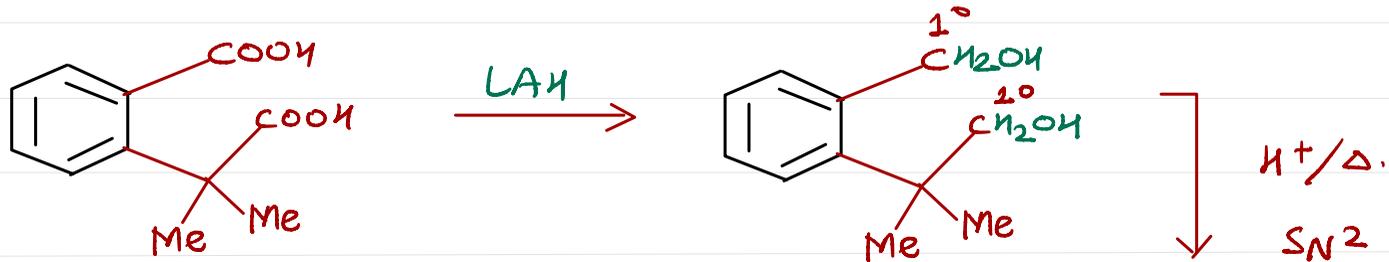
Benzylic (FR)

KOH alc
E2

(O)



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



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

Thank
you!

