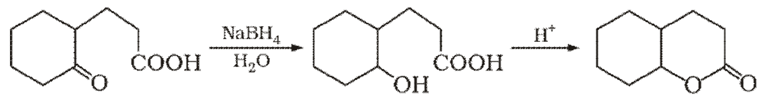
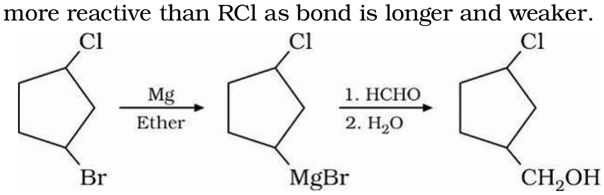
Daily Tutorial Sheet-5	Level-1

61.(D) $NaBH_4$ reduces only carbonyl group, not carboxylic acids and esters.

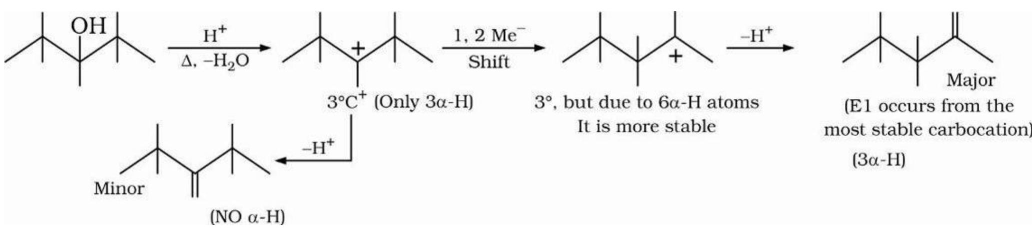


62.(B) RBr is more reactive than RCl as bond is longer and weaker.



63.(D) $CH_3-\overset{O}{\overset{||}{C}}-O-\overset{O}{\overset{||}{C}}-CH_3 \xrightarrow{C_2H_5OH} CH_3-\overset{O}{\overset{||}{C}}-OC_2H_5+CH_3-\overset{O}{\overset{||}{C}}-OH$

64.(B)



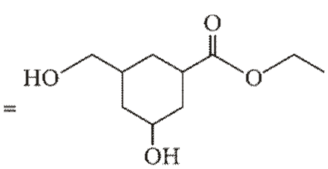
65.(A) Simple distillation will separate MeOH (b.p. = 64.7°C) from H_2O (b.p. = 100°C); due to difference in their b.p.(s) p, being high.

66.(A) Alcohol will be 2° [Lucas test after some time]

$\xrightarrow[\Delta]{H^+} C_4H_8 \xrightarrow[Zn]{O_3} CH_3CHO$

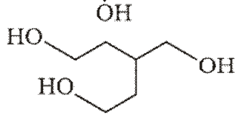
$\Rightarrow$ Alcohol is 2-Butanol

67.(D) P =



[$NaBH_4$ does not reduce ester group to give alcohols]

Q =

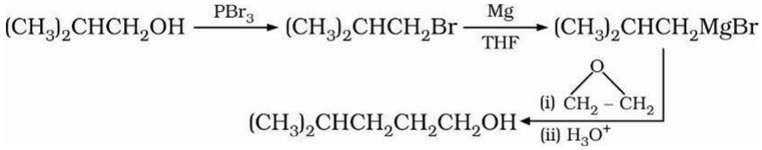


[$LiAlH_4$ reduces aldehyde, ketones, acids & esters to alcohols]

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

68.(C) Obviously H-bonding does not exist in thiols.

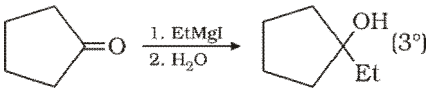
69.(D)



70.(CD) $EtMgI + A \xrightarrow{H^+(aq)} \underset{\text{(an alcohol)}}{B} \xrightarrow{PCC}$ (no reaction)

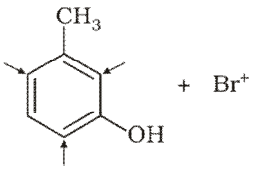
B is tertiary alcohol as it resist oxidation. Hence A has to be a ketone

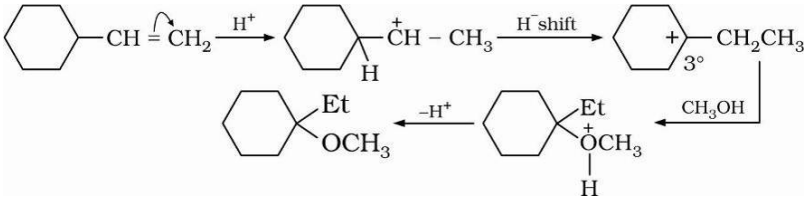
Hence A is : $CH_3CH_2-\overset{\overset{O}{\|}}{C}-CH_3 \xrightarrow[2.\ H_2O]{1.\ EtMgI} Et-\overset{\overset{OH}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$ (3°)

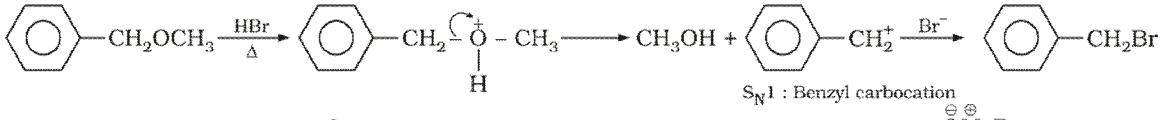
or A can be  (3°)

71.(D) $CH_3CH=CH_2 \xrightarrow[2.\ H_2O_2/OH^-]{1.\ BH_3/THF} CH_3CH_2CH_2OH \xrightarrow{PCC} CH_3CH_2CHO$

72.(A) OH activates the ring via strong +M effect at *o*-ortho and *p*-para position to it. Note that CH_3 also activates the ring via +H effect at the same positions.



73.(A) 

74.(B) 

S_N1 : Benzyl carbocation

75.(CD) (A) is :