

D. B. College. (Jaynagar) Leat-8

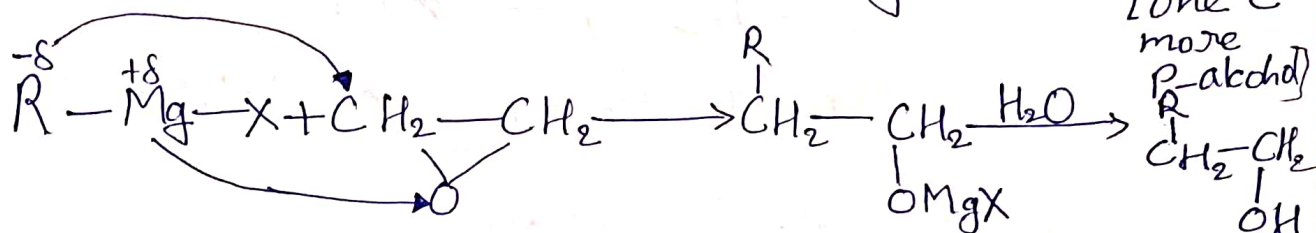
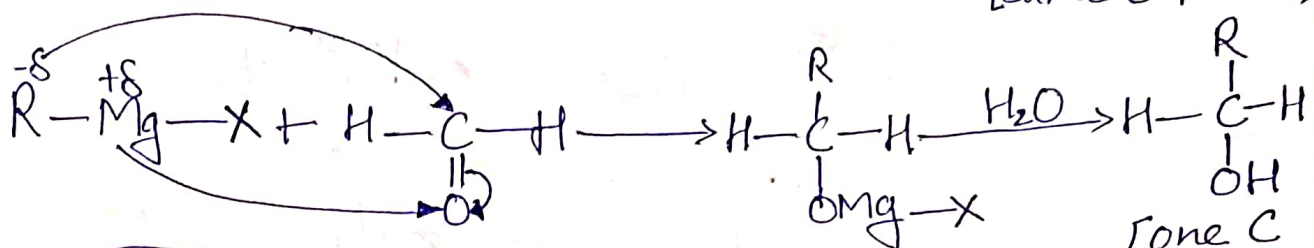
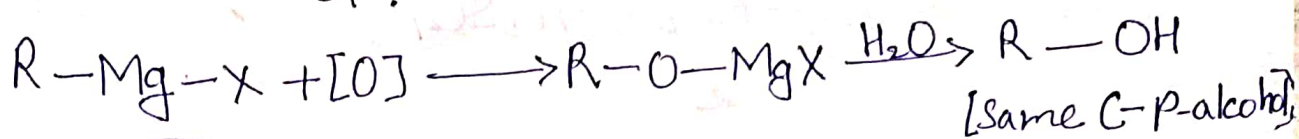
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Chemistry department B.Sc (sub) Part-II

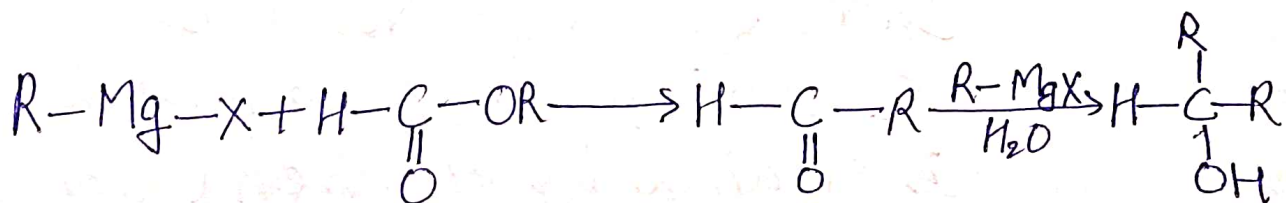
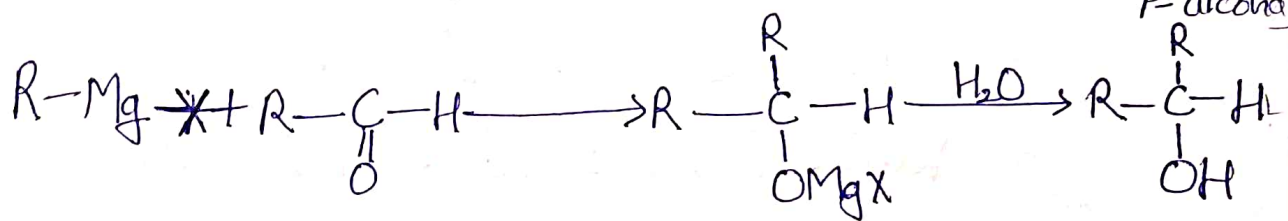
Mob: - 8750 390927

(i) From Grignard reagent:

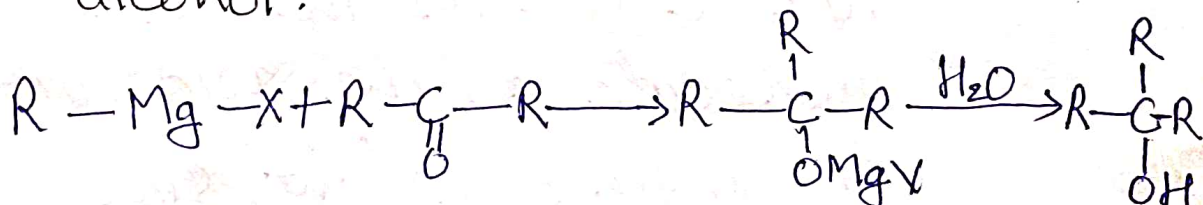
(i) P-alcohol:

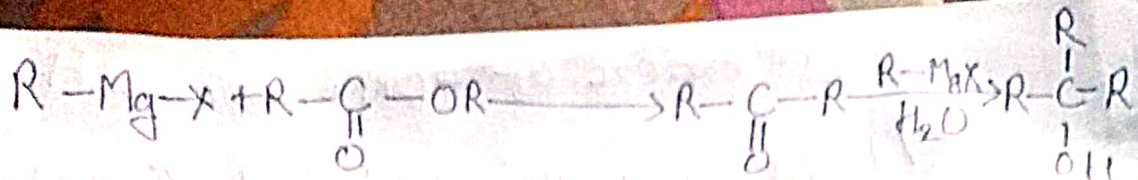


(ii) S-alcohol:



(iii) T-alcohol:



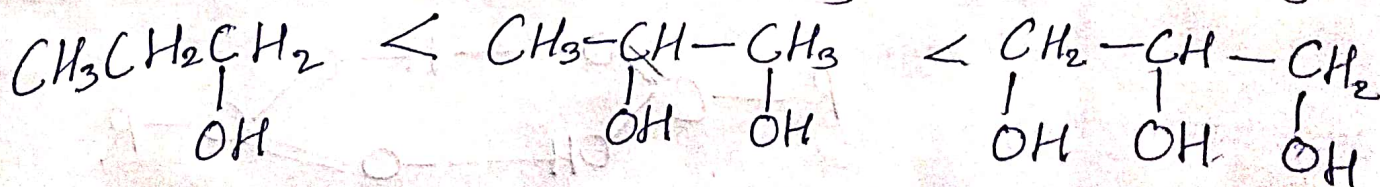
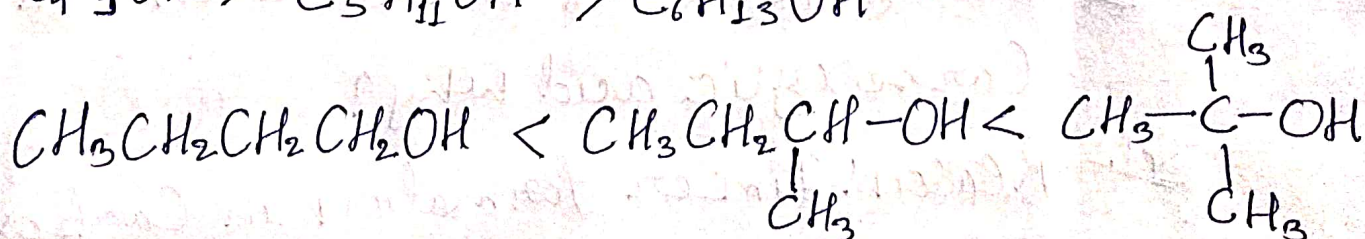
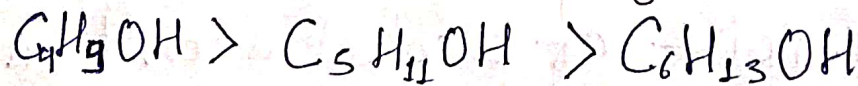


□ Physical Properties!

- (i) C_1 to C_{11} are colourless liquids and high alcohols are solids,
- (ii) Density of monohydric alcohol is less than H_2O .
- (iii) Density \propto mol. wt. (for monohydric alcohol).
- (iv) Solubility! C_1 to C_3 and τ -butyl alcohol is completely soluble in H_2O due to H-bonding.

Solubility \propto NO. of side chains $\propto \frac{1}{\text{molecular weight}}$

Order of Solubility!

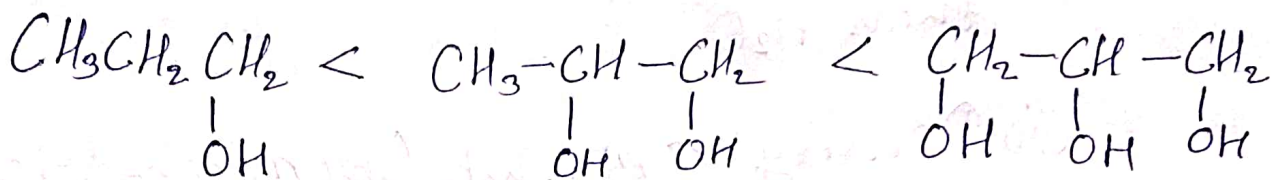
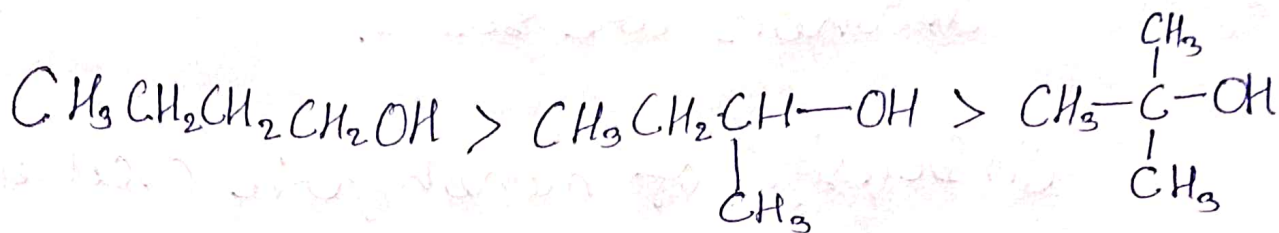


[Number of -OH increases, H-bonding increases]

(V) Boiling Points! B.P. \propto molecular weight

If molecular wt. is same then B.P. $\propto \frac{-1}{\text{branching}}$

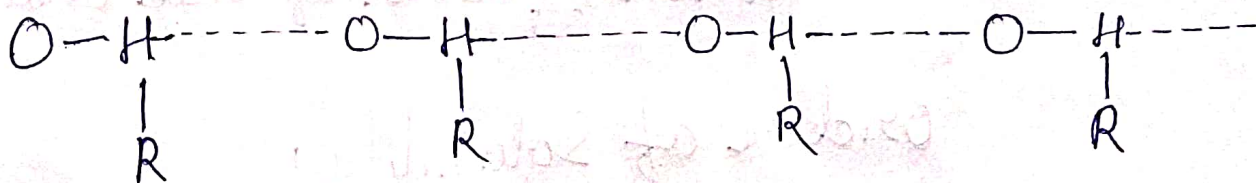
Order of BP: $C_4H_9OH < C_5H_{11}OH < C_6H_{13}OH$



[Number of OH increases, H-bonding increases]

Ex. Boiling point of alcohol is more than corresponding ether. why?

Sol. Reason: H-bonding in alcohol.



Ex. Boiling point of alcohol is less than corresponding Carboxylic acid why?

Sol. Reason: Dimer formation in Carboxylic acid.

