VCQ - sem - IV
MJC - 6 (T)
Unit - 1.

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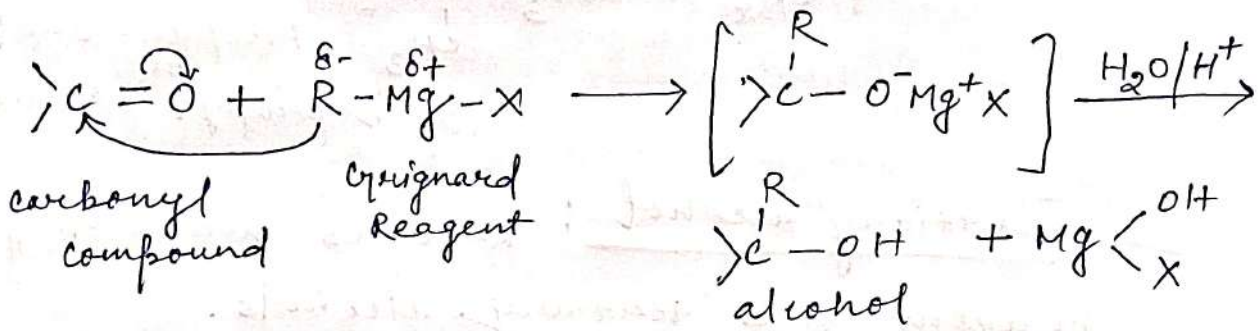
## Methods of Preparation of Alcohols. continued.....

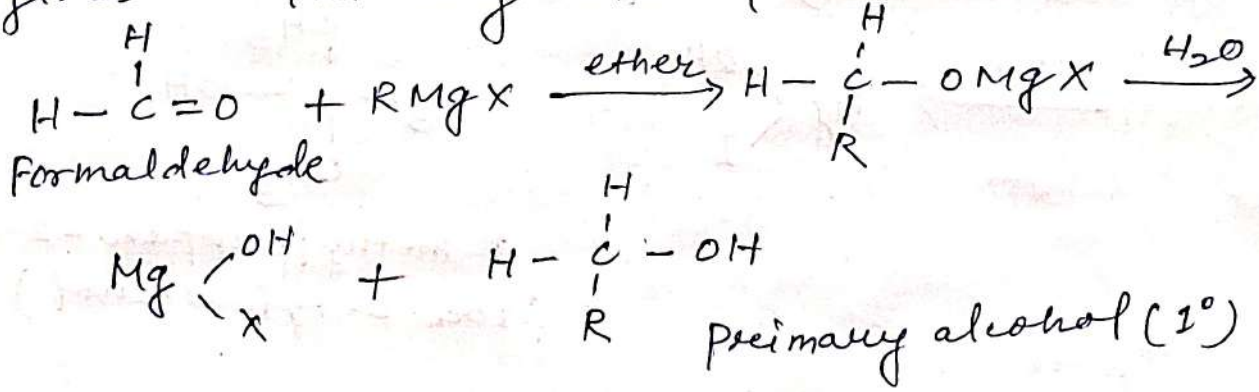
### [4] From Grignard's reagent.

Grignard reagent ( R - Mg - X ) forms addition products with aldehydes and ketones. These addition products on hydrolysis with water in the presence of HCl gives alcohol.

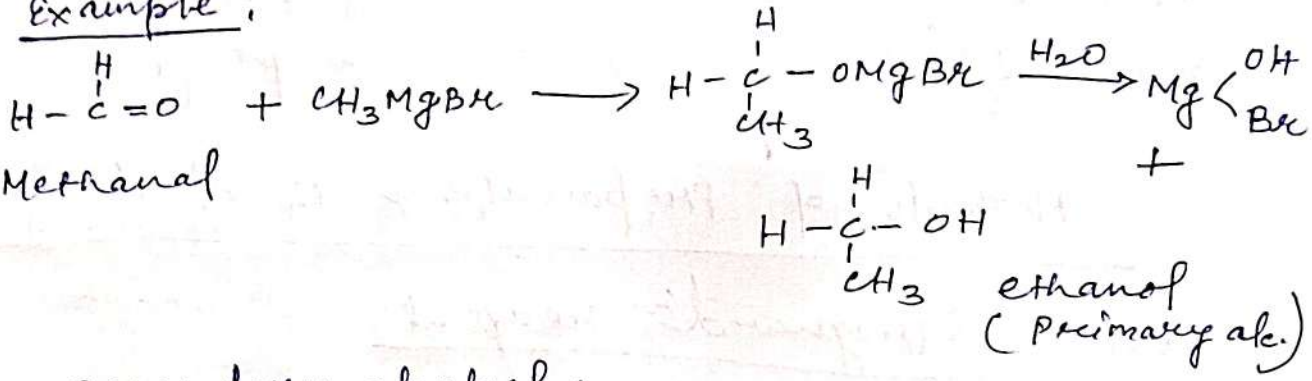



This Reaction can be used to produce different types of alcohols.

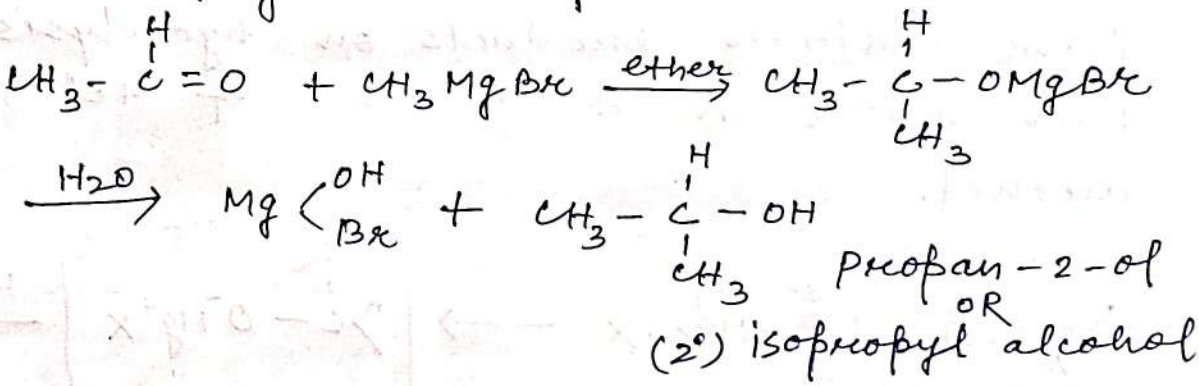
a. **Primary alcohol** : Grignard Reagent with formaldehyde (methanal) gives a primary alcohol.



Example :




b. Secondary alcohol : All Aldehydes (except formaldehyde) give secondary (2°) alcohol with Grignard Reagent.




c. Tertiary alcohol : ketones with Grignard's reagent give tertiary alcohols.

For eg - Acetone (propanone) gives tert. butyl alcohol (3°)