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1a Based on the number of Hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the number of hydrogen atoms attached to the carbon atom bearing the hydroxy group are three or two, it is called a Primary Alcohol (1°) if it's one Hydrogen atom it is called ~~tertiary alcohol~~ secondary alcohol (2°) if none it is called a tertiary alcohol (3°)

Examples

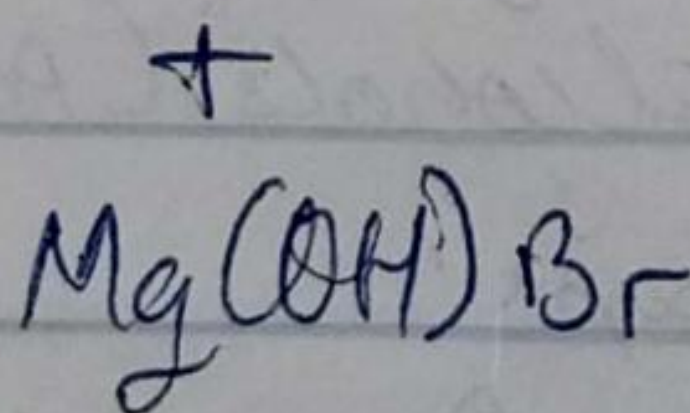
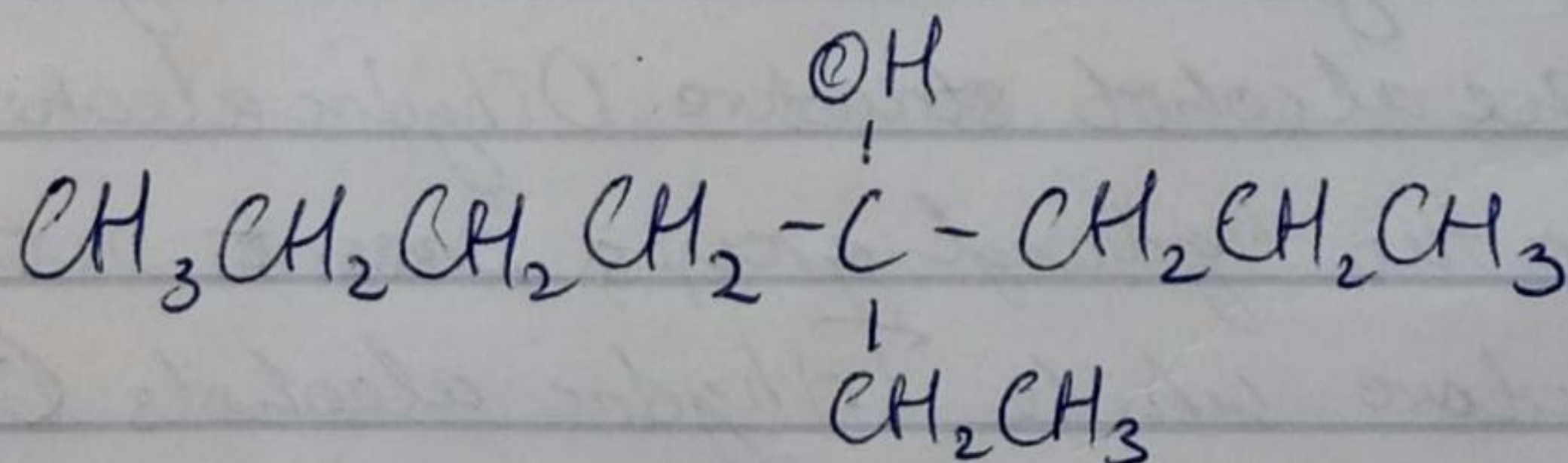
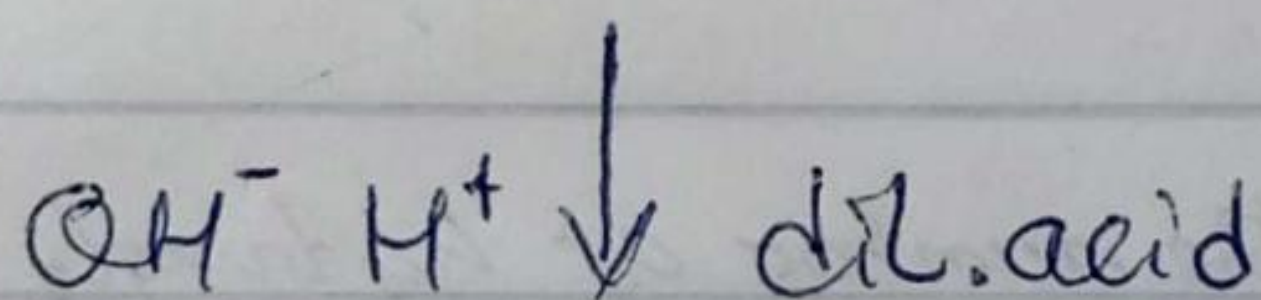
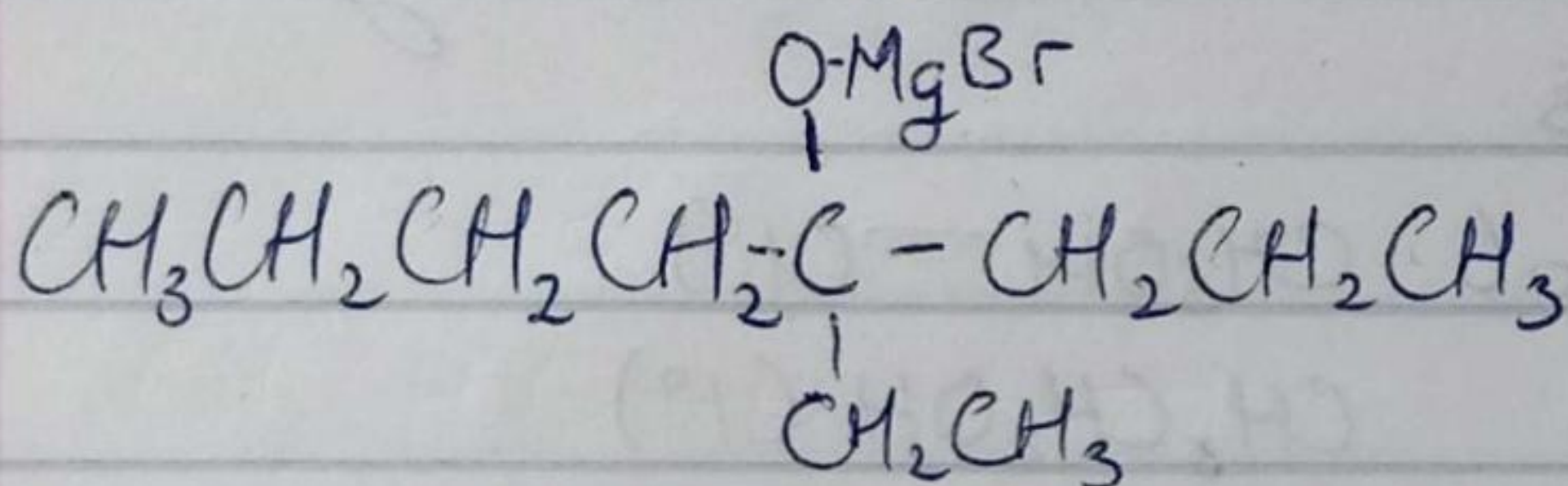
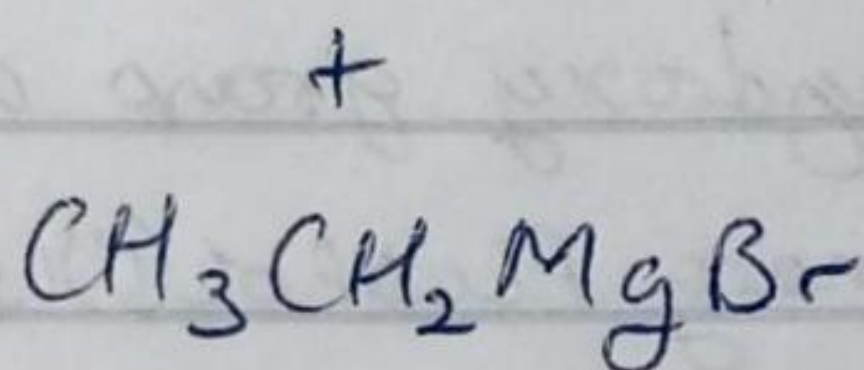
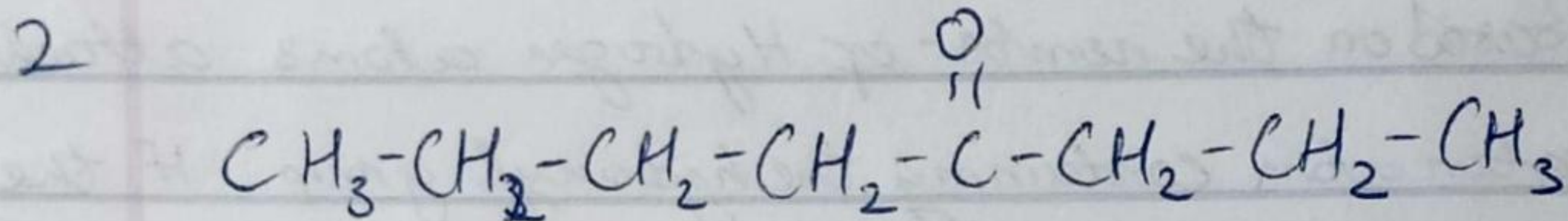
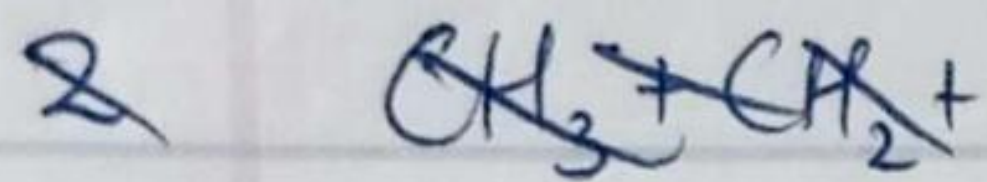
Methanol CH_3OH (1°)

Ethanol $\text{CH}_3\text{CH}_2\text{OH}$ (1°)

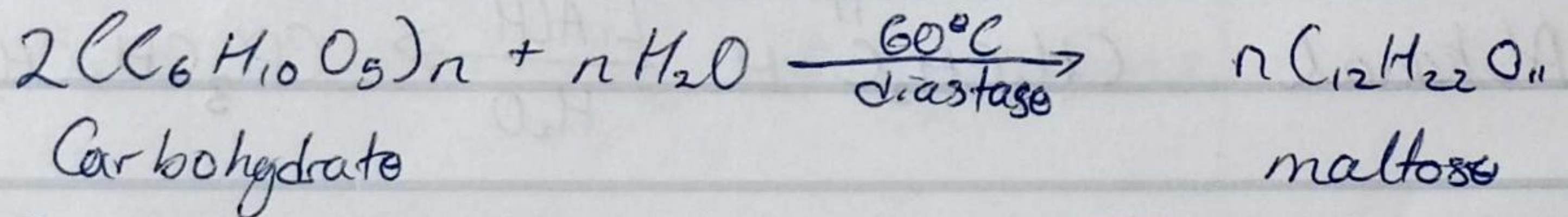
b Based on the number of hydroxyl group they possess
Monohydric alcohols have one hydroxyl group present in the alcohol structure. Dihydric alcohols (Glycols) have two hydroxyl groups present in the alcohol structure while Trihydric alcohols (Triols) have three hydroxyl groups present in their alcohol structure
Polyhydric alcohols (Polyols) have more than three hydroxyl groups

Examples are; Propanol

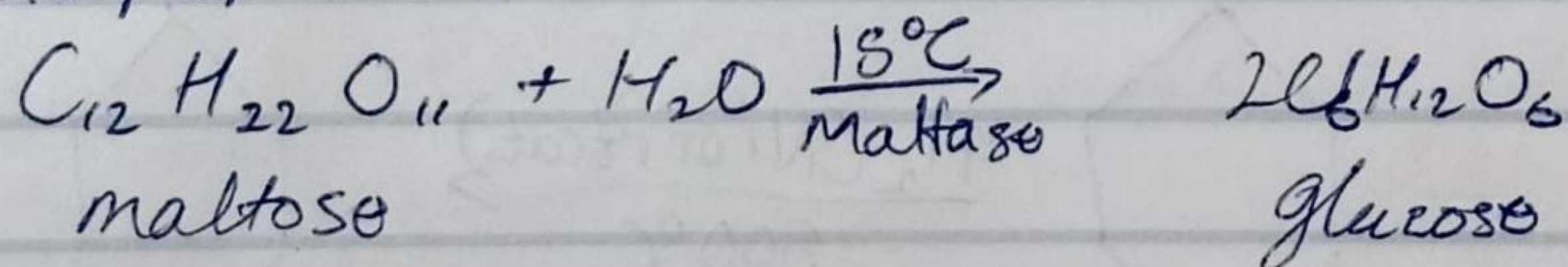
Ethane-1,2-diol



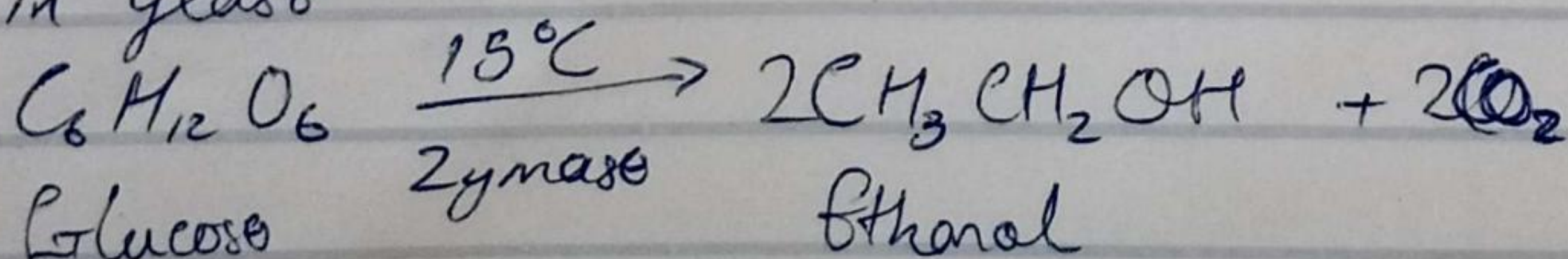
3 Carbohydrates such as starch are major groups of natural compounds that can be made to yield ethanol by the biological process of fermentation. The biological catalysts, enzymes found in yeast break down the carbohydrate molecules into ethanol to give a yield of 95%. The starch containing materials include molasses, potatoes, cereals, rice and on warming with malt to 60°C for a specific period of time are converted into maltose by the enzyme diastase contained in the malt



The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase add at a temp of 15°C

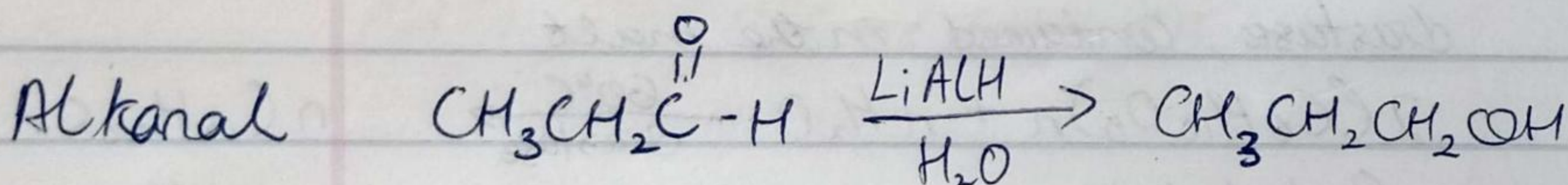


The glucose at constant temperature of 15°C is then converted into alcohol by the enzyme zymase also contained in yeast

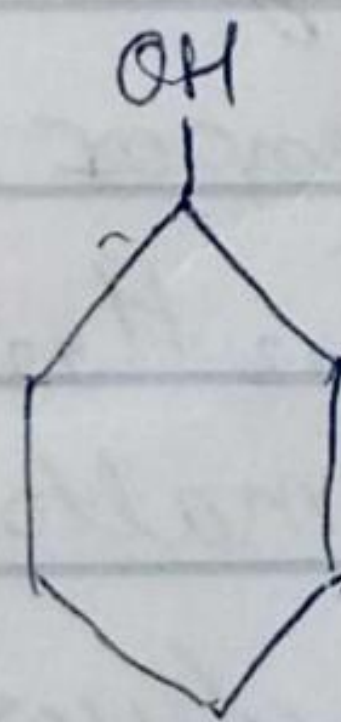
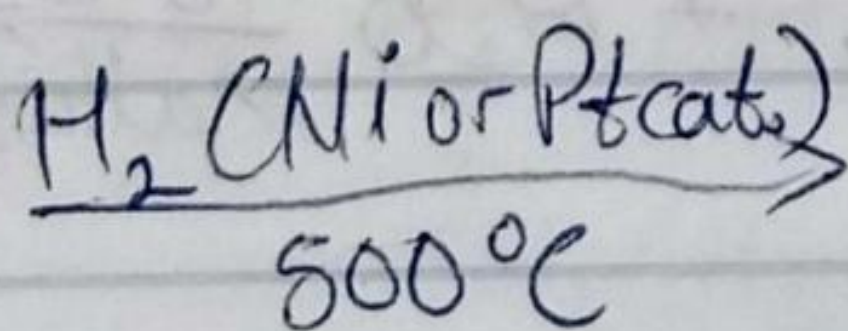
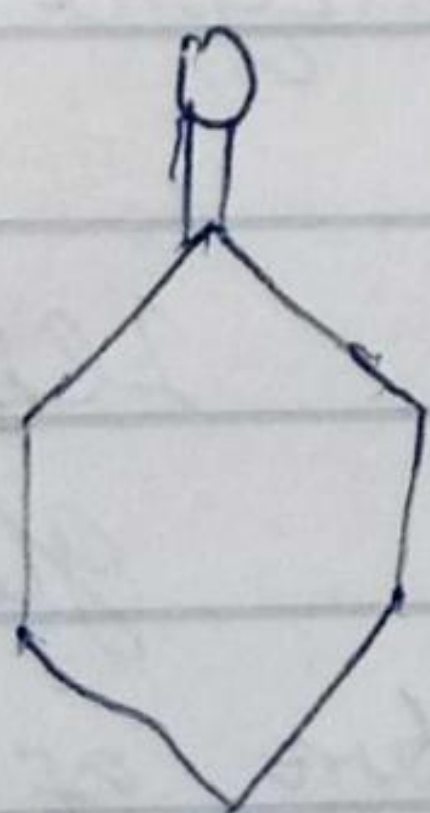


Reduction of Alkanone

The reduction of ~~alkanone~~ ^{aldehyde} and ketone yields primary and secondary alcohols respectively by reaction with hydrogen in the presence of Platinum or nickel catalysts or with complex metal hydrides such as LiAlH_4 Lithium tetrahydridoaluminate (III) or (NaBH_4) Sodium tetrahydridoborate



Alkanone



Cyclohexanol