

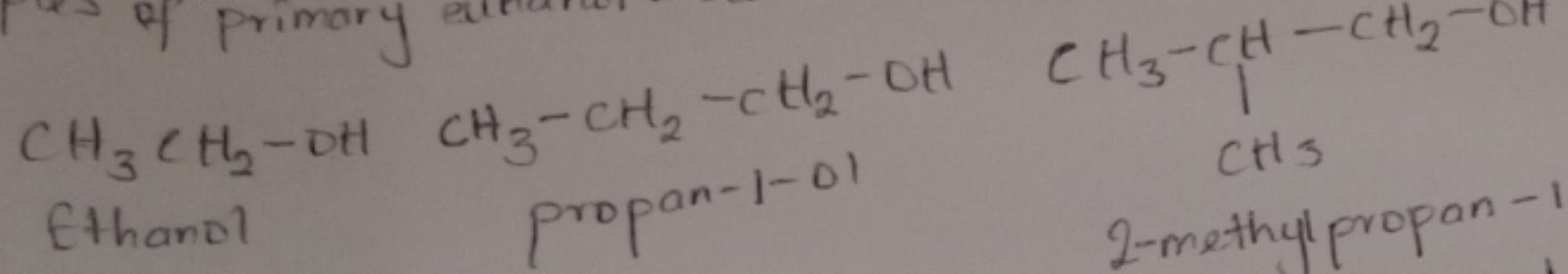
NAME: CHEM 102
 DEPARTMENT: DEBORAH
 MATRIC. NO: 19/MHS D2/029
 COURSE: NURSING

1. There are two major classification of alkanol. Alkanol is also known as alcohols.

- * Primary alkanol (1°)
- * Secondary alkanol (2°)

Primary alkanol

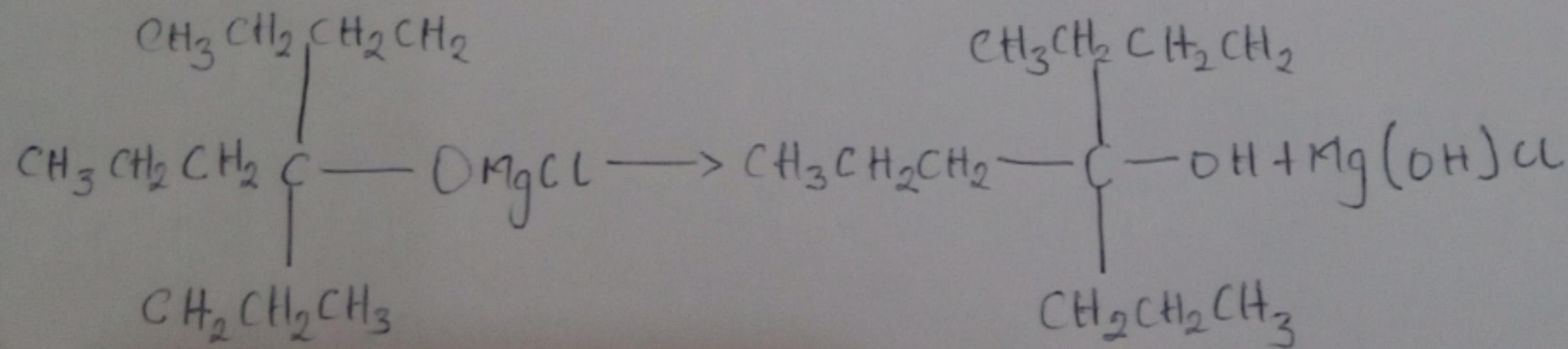
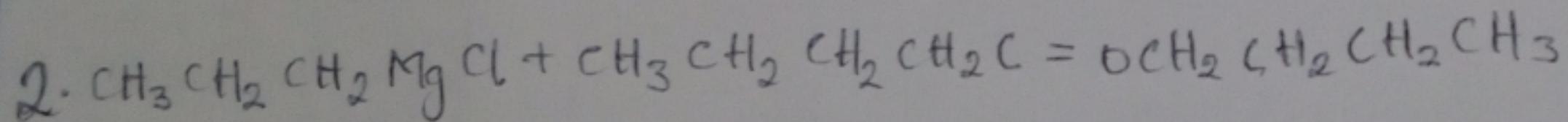
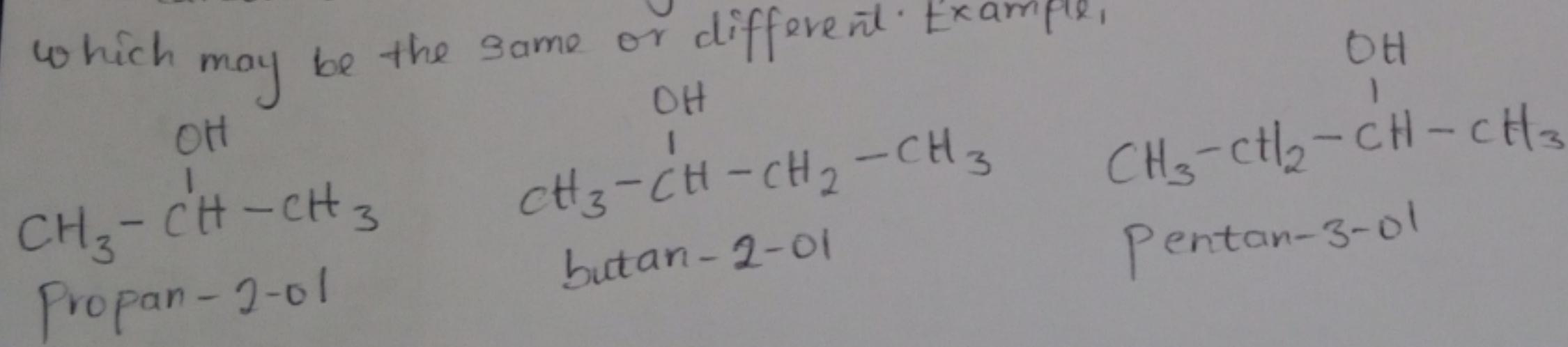
The carbon which carries the -OH group is only attached to one alkyl group. Some examples of primary alkanol include:



NOTE: It doesn't matter how complicated the attached alkyl group is in each case, there is only one linkage to an alkyl group from the CH_2 group holding the -OH group. There is an exception to this. Methanol, CH_3OH , is counted as a primary alcohol even though there are no alkyl group attached to the carbon with the -OH group on it.

Secondary alkanol

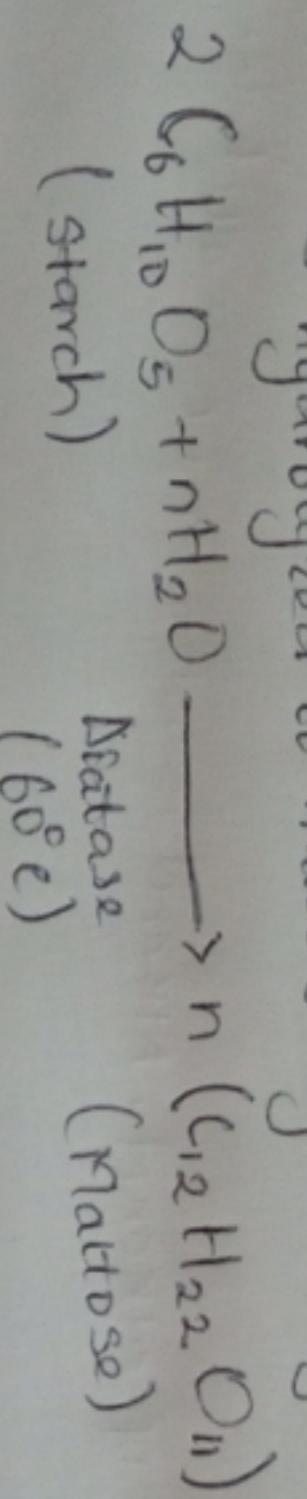
The carbon with one -OH group attached is joined directly to two alkyl groups, which may be the same or different. Examples:



3. The industrial manufacturing of ethanol is carried out by the process of FERMENTATION

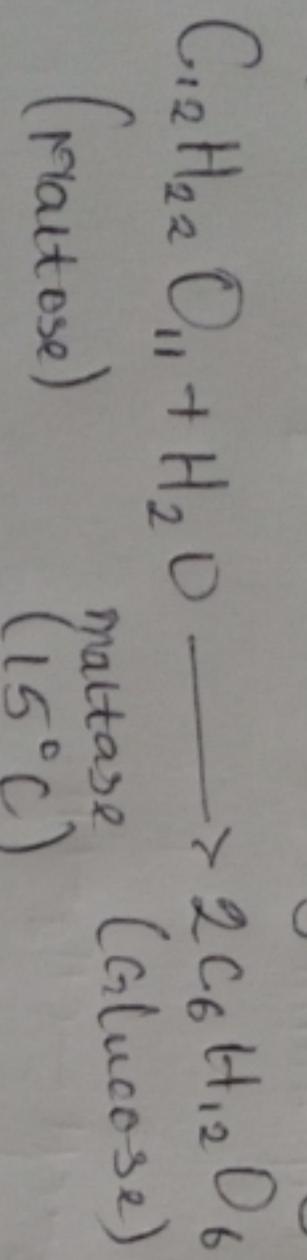
Step 1: Hydrolysis of starch

Starch is hydrolyzed to maltose by an enzyme known as MALTASE under 60°C .



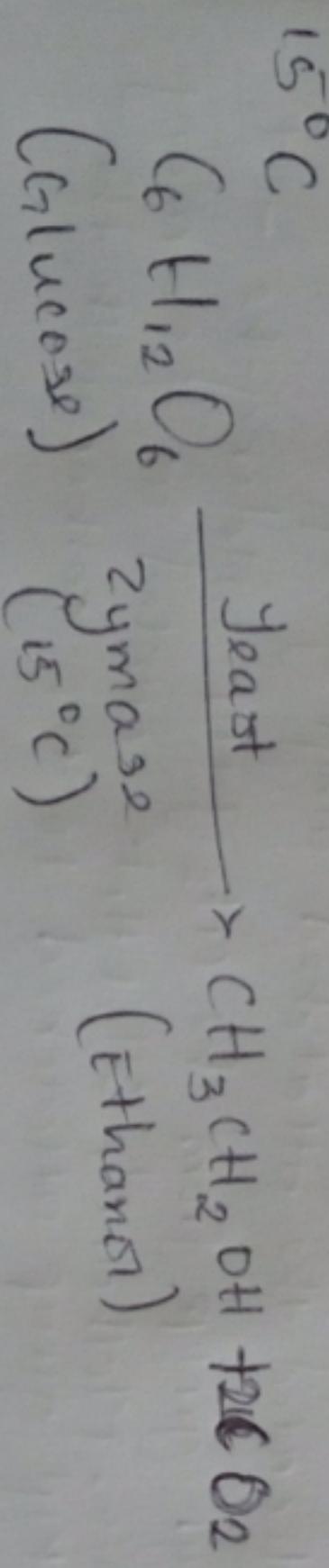
Step 2: Conversion of maltose

Maltose is converted to glucose by an enzyme known as MALTASE under 15°C



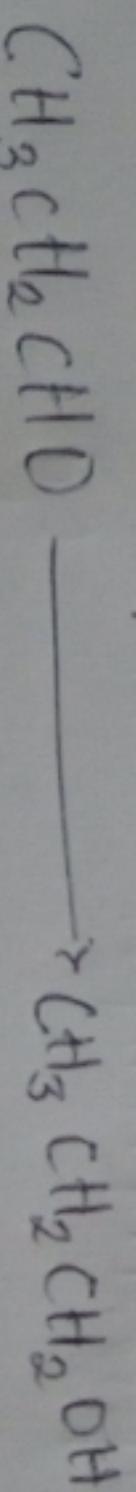
Step 3: Conversion of glucose

Glucose is converted into ethanol using an enzyme known as ZYMASE under 15°C



4. Alkanes and alkyl halides can be reduced using LiAlH_4 or $(\text{C}_2\text{H}_5)_2\text{O}$

Alkanones: The reduction process of propanone is propanol.



Alkanals: The reduction process of propanal to propanol

