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MATRIC NO: 19/MHS01/367

DEPARTMENT: MBBS

1) Alcohol is classified into 2:

a) This is based on the number of hydrogen atom on the carbon carrying the OH group. If the carbon carrying the OH group has 3 or 2 hydrogen atoms attached to it, it is called primary alcohol (1°). If it is carrying one hydrogen atom it is called secondary alcohol (2°) and if ~~no~~ it is not carrying any hydrogen atom on the carbon atom bearing the OH group, it is called tertiary alcohol (3°).

Eg: CH_3OH (1°)

b) This is based on the number of OH group present in the alcohol structure. If the alcohol structure has one OH group present it is called monohydric alcohol. If it has two OH group present in the alcohol structure, it is called dihydric alcohol or glycol. If it has three OH group present in the alcohol structure, it is called triol or trihydric alcohol. If it has more than three OH group present in the alcohol structure, it is called polyhydric alcohol or polyol.

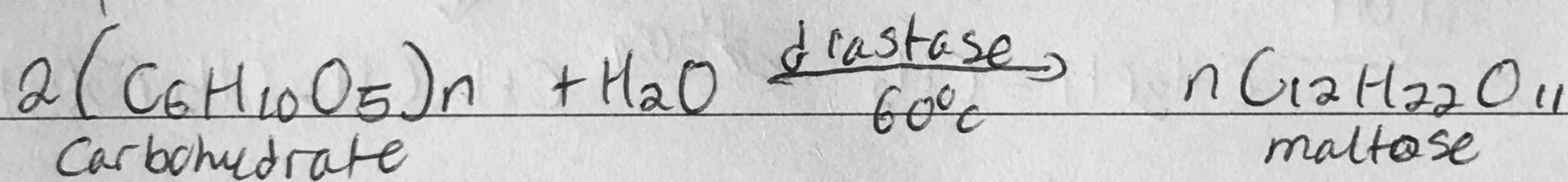
Eg: $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}_2\text{OH}$ (glycol)

2) Lower alcohols with up to three carbon atoms in their molecules are soluble in water because they can form hydrogen bond with water molecules. The water solubility of alcohols decreases with increasing relative molecular mass.

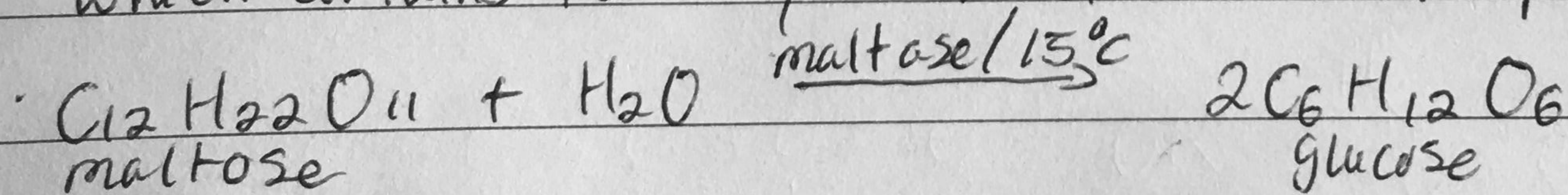
All monohydric alcohols are soluble in organic solvent. Solubility of simple alcohols and polyhydric alcohols is due to their ability to form hydrogen bonds with water molecules.

3) Carbohydrate such as starch produce ethanol via fermentation process.

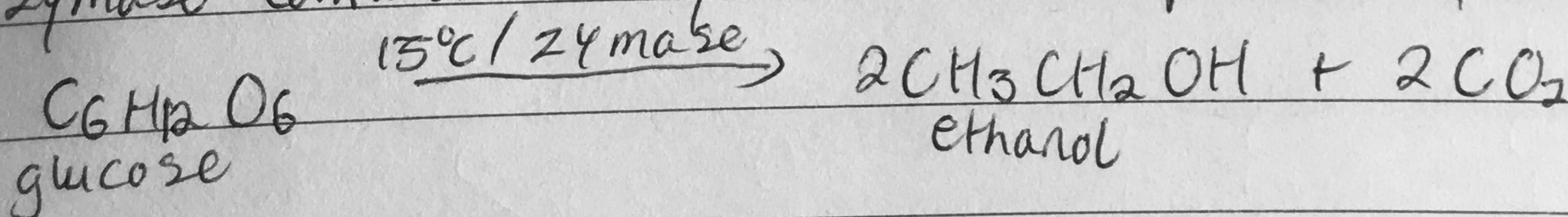
Step I: Breaking down of carbohydrate into maltose with the aid of the enzyme diastase found in malt at a temperature of 60°C .

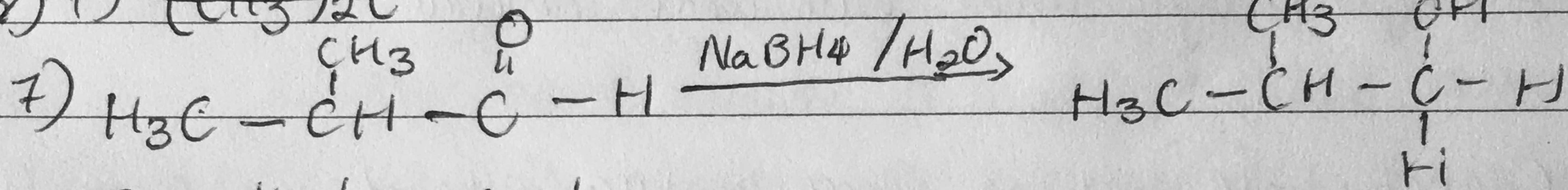
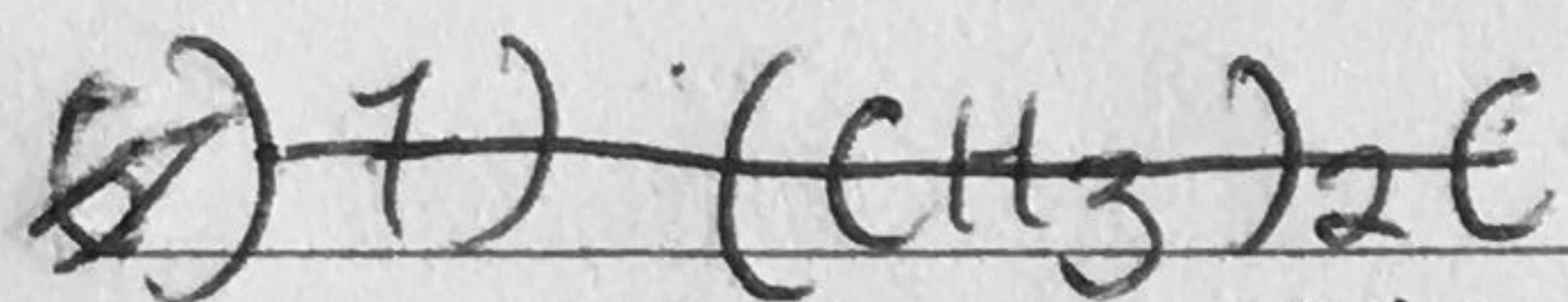
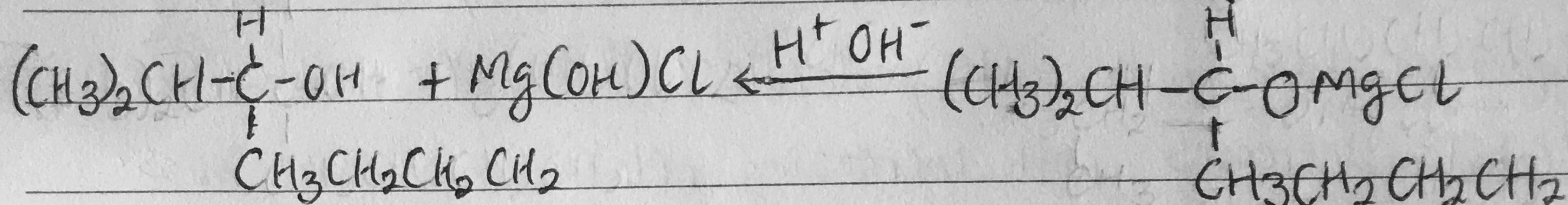
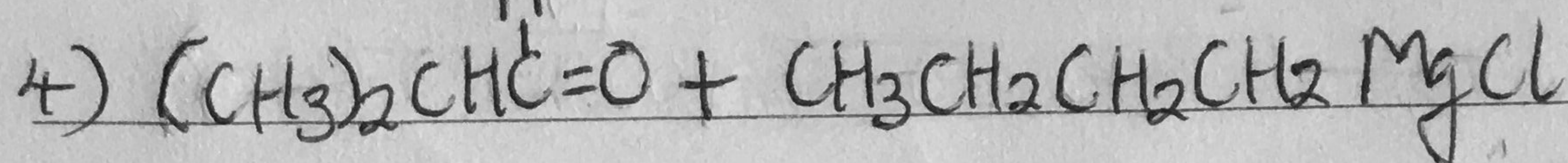


Step II: Breaking of maltose into glucose on addition of yeast which contains the enzyme maltase at a temperature of 15°C .



Step III: Conversion of glucose to ethanol by the enzyme zymase contained in yeast at a temperature of 15°C .





2-methyl propanal

2-methyl propanol

