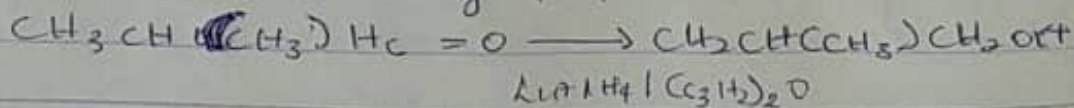


Name: Didam Mercy Tobaliat

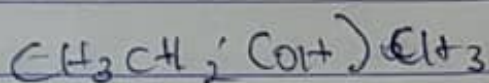
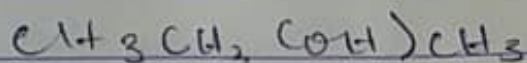
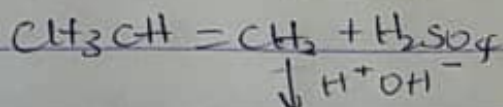
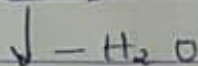
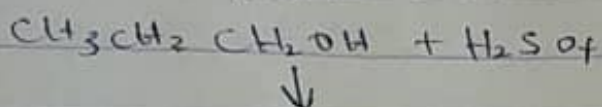
Matric No: 19/MHSOI/137

Department: MBBS

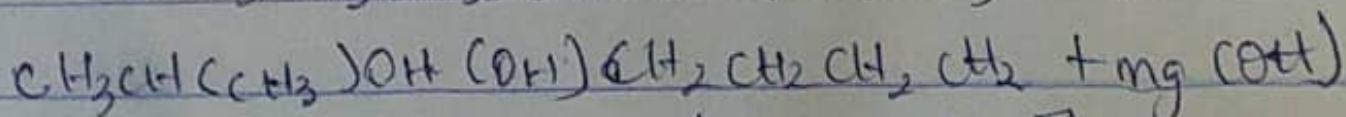
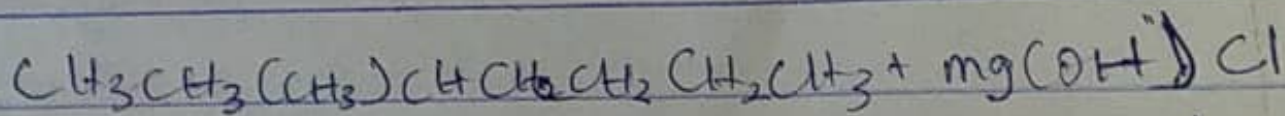
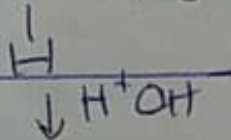
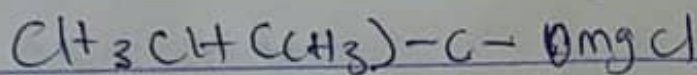
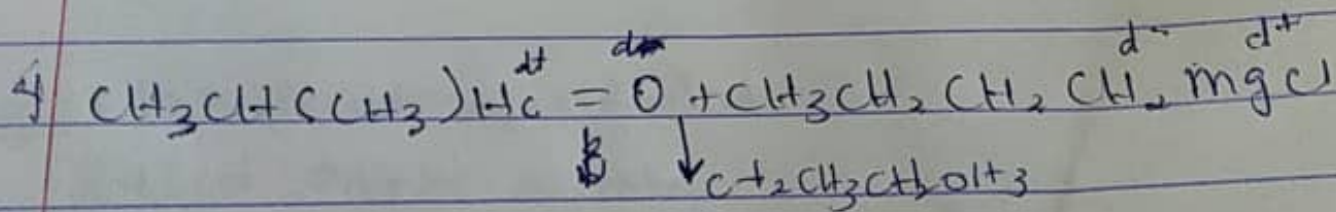
7) Reduction of 2-methyl propano1



8) Conversion of propan-1-ol to propan-2-ol



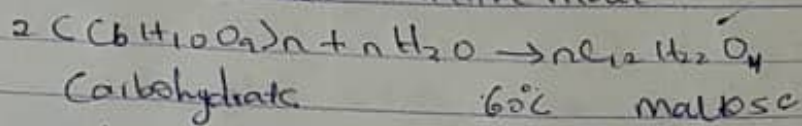
Propan-2-ol



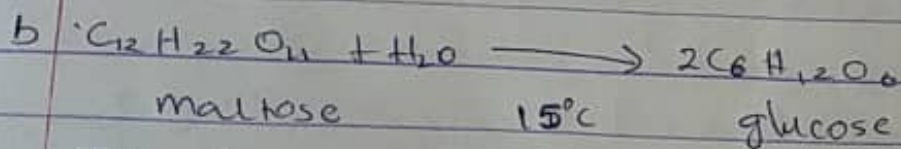
2-methyl heptan-3-ol

3) Industrial production of Alcohols.

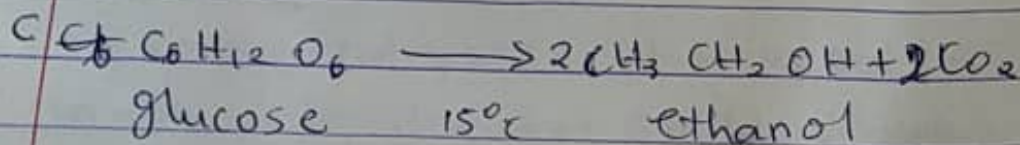
a) Starch containing materials including potatoes, cereal etc. on warming with ~~malt~~ 60°C for a specific period of time are converted into maltose by the enzyme diastase contained in the malt.



The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase and at a temperature of 45°C .



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



(4) Classification of alcohols.

Based on the number of hydrogen atoms attached to the carbon atom containing the hydrogen group.

If the number of hydrogen atoms attached to the carbon atom being the hydrogen group are three or two, it is called primary alcohol (1°), if it is one hydrogen atom it is called secondary (2°) if no hydrogen atoms

attracted to the carbon atom bearing the hydroxyl group. It is called a tertiary alcohol (3°)
e.g. CH_3OH methanol (1°), $\text{CH}_3\text{CH}_2\text{OH}$ ethanol (1°)
propan-2-ol (2°), $(\text{CH}_3)_3\text{COH}$ tert-butanol (3°)
e-methyl propanol-2-ol (3°)

Based on the number of hydroxyl groups they possess, monhydric alcohols have one hydroxyl group present in the alcohol structure, dihydric alcohols are also called glycols and have 2 hydroxyl groups present in the structure of the alcohol. Polyhydric alcohols have more than three hydroxyl groups.

E.g. $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ propanol (monhydric alcohol)
 $\text{HOCH}_2\text{CH}_2\text{OH}$ ethane-1,2-diol (dihydric alcohol)
 $\text{OHCH}_2\text{CH}(\text{OH})\text{CH}_2\text{OH}$ propanol-2,3-triol

2 solubility

Lower alcohols with up to three carbon atoms in the molecules are soluble in water because these lower alcohols can form hydrogen bonds with water molecules. The water solubility of alcohols decreases with relative molecular masses. All monohydric alcohols are suitable in organic solvents. The solubility of simple alcohols and polyhydric alcohol is largely due to their ability to form hydrogen bonds with water molecules.