

OLATUNJI ANUOLUWAPO TEMISOPE CHM 102

COMPUTER ENGINEERING.

19/ENG02/050.

Assignment

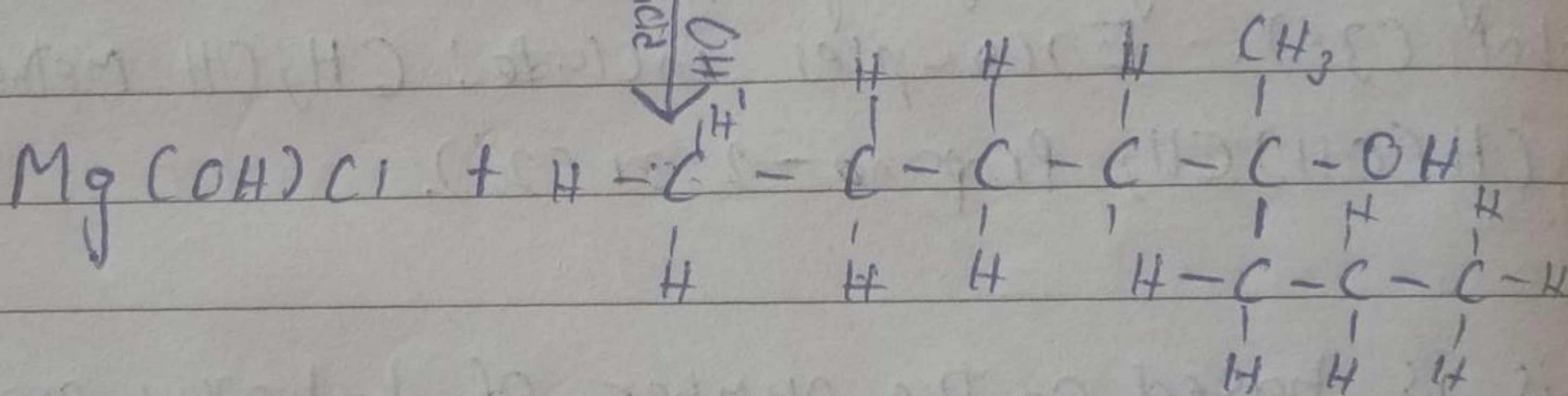
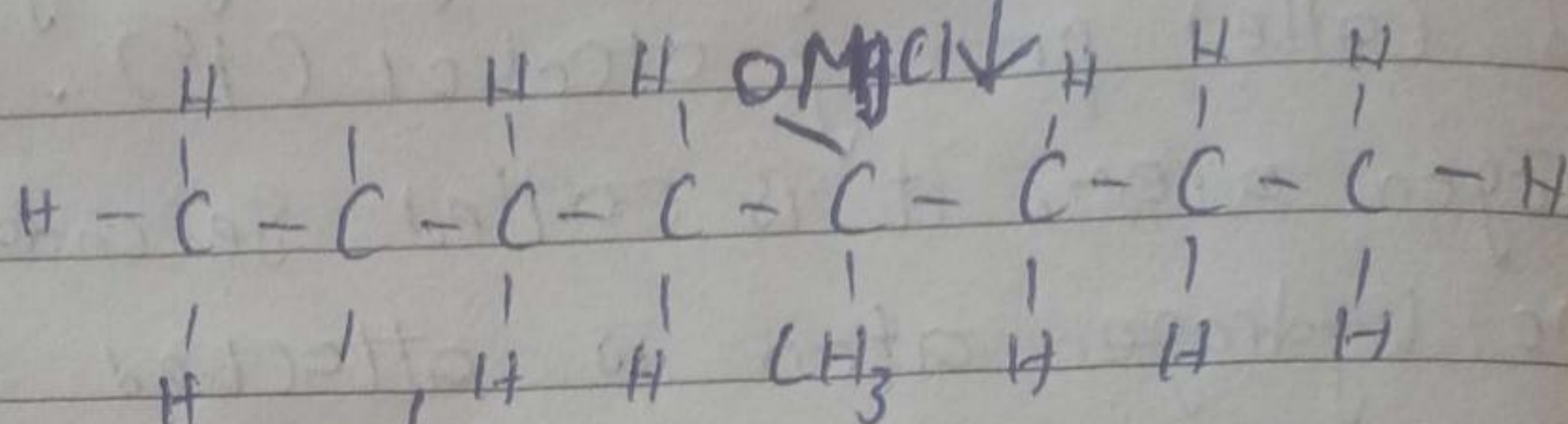
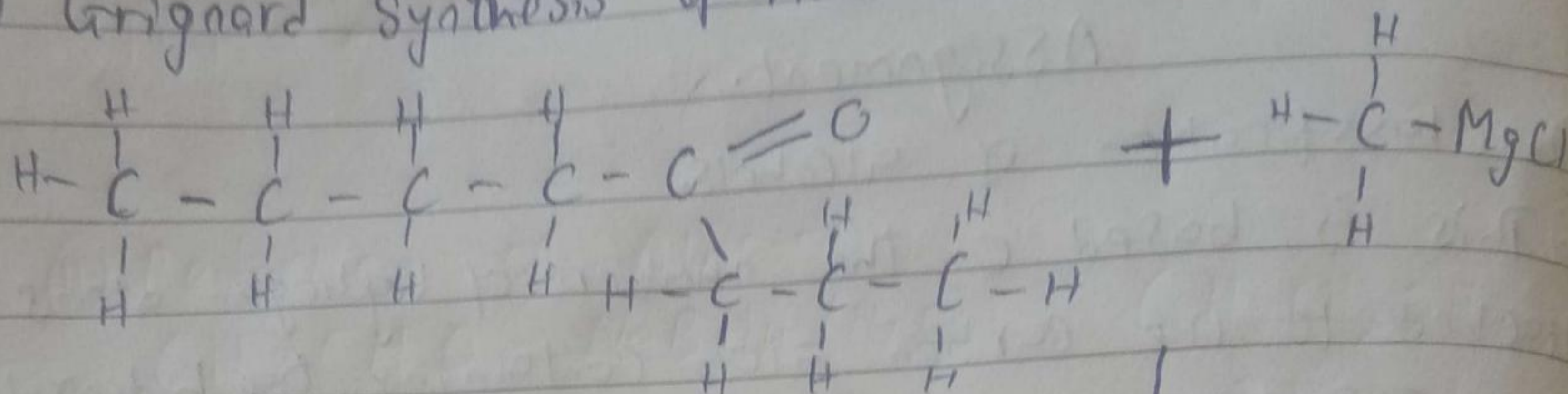
(i) Classification of alcohols.

(ii) This is based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the numbers of hydrogen atoms attached to the carbon atom bearing the hydroxyl group are 3 or 2, it is called primary alcohol (1°). If it is one hydrogen atom, it is called secondary alcohol (2°) and if no hydrogen atom is attached to the carbon atom bearing the hydroxyl group, it is called a tertiary alcohol (3°). Examples include: CH_3OH Methanol (1°), $\text{CH}_3(\text{CH}_2\text{OH})\text{CH}_3$ Propano-2-ol (2°).

(iii) This is based on the number of hydroxyl groups they possess. Monohydric alcohols have one hydroxyl group present in its structure, Dihydric alcohols (Glycols) have two hydroxyl groups present in its structure, Trihydric alcohols (Trisols) have three hydroxyl groups present in its structures and Polyhydric alcohols (Polyols) have more than three hydroxyl groups. Examples are $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ propanol (Monohydric alcohols),

$\text{HOCH}_2\text{CH}_2\text{OH}$ Ethane-1,2-diol (Dihydric alcohol)

② Grignard Synthesis of Alcohols.

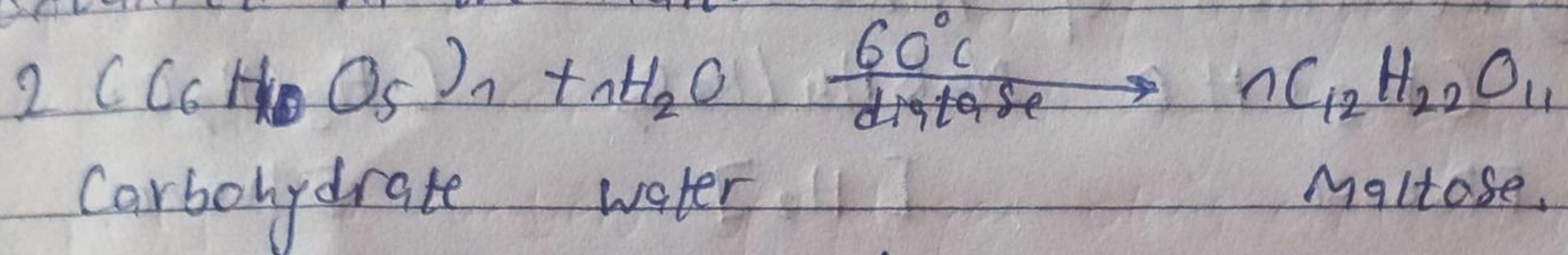


③ Industrial Manufacture of Alcohol.

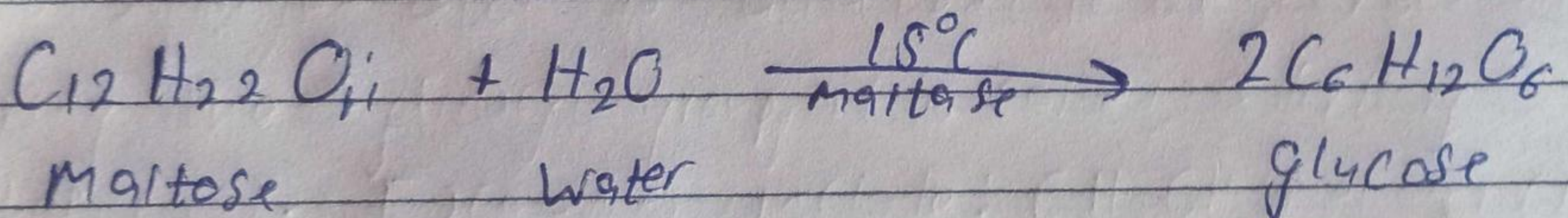
Carbohydrates such as Starch are a major group of natural compounds that can be used to yield ethanol by the biological process of fermentation. The biological catalysts, enzymes found in yeast break down the carbohydrate

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 and at a temperature of 15°C .



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

