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***DEPARTMENT:NURSING.***

***COLLEGE:MHS.***

***COURSE CODE:CHEMISTRY 102.***

***DATE:11/05/2020.***

***Alcohol are very important oragnic compunds.Discuss briefly their classification and give one examples each .***

* ***It is 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 hydroxyl group are three or two, it is called primary alcohol.***

***If it is one hydrogen atom, it is called secondary alcohols(2°).***

***If no hydrogen atom is attached to the carbon atom bearing the hydrogen group, it is called tertiary alcohol(3°l.***

***Examples areCH3OH-methanol(1°), CH3CH(OH)CH3-propan-2-ol(2°), (CH3)3C-OH-2methyl propan-2-ol(3°).***

***Based on the numbers of the hydroxyl groups they posses.***

* ***Monohydric alcohols have one hydroxyl group present in the alcohol structure.***
* ***Dihydric alcohols are also called glycol have two hydroxyl groups present in the alcohol structure.***
* ***Trihydric also known as triole have three hydroxyl groups present.***
* ***Polyhydric or polyols have more than three hydroxyl groups.***

***Example are:CH3CH2CH2OH-propanol(monohydric alcohols).***

***HOCH2CH2OH-ethane-1, 2-diol(Dihydric alcohol).***

***OHCH2CH(OH)CH2OH-propane-1, 2, 3-triol(trihydric alcohols).***

* ***Discuss the solubility of alcohols in.water, organic solvent.***

***Solubility in alcohols:lower molecules with up to three carbon atoms in their molecules are soluble in water because these lower molecule can form hydrogen bond with water molecules.These water solubility of alcohols decreases with increasing eelatives molecular mass.***

***All monohydric alcohols are soluble in organic solvents.The solubility of simple alcohols and polyhydric alcohols is largely due to their ability to form hydrogen bonds with water molecules.***

* ***Show the three steps in the industry manufacturr of ethanol equation are mandatory.***

***The starch containing materials includes molasses, potatoes, cereals, rice and on warming with malt 60°c for a specific period of time are converted into maltose by the enzymes diatase contained in the malt.***

***2(C6H10O5)n+nH2---------nC12H22O14.***

***Carbohydrate 60°c/diatase maltose.***

***The maltose is broken down into glucose on addition of yeast which contains the enzymes maltase and at a temperature of 15°c.***

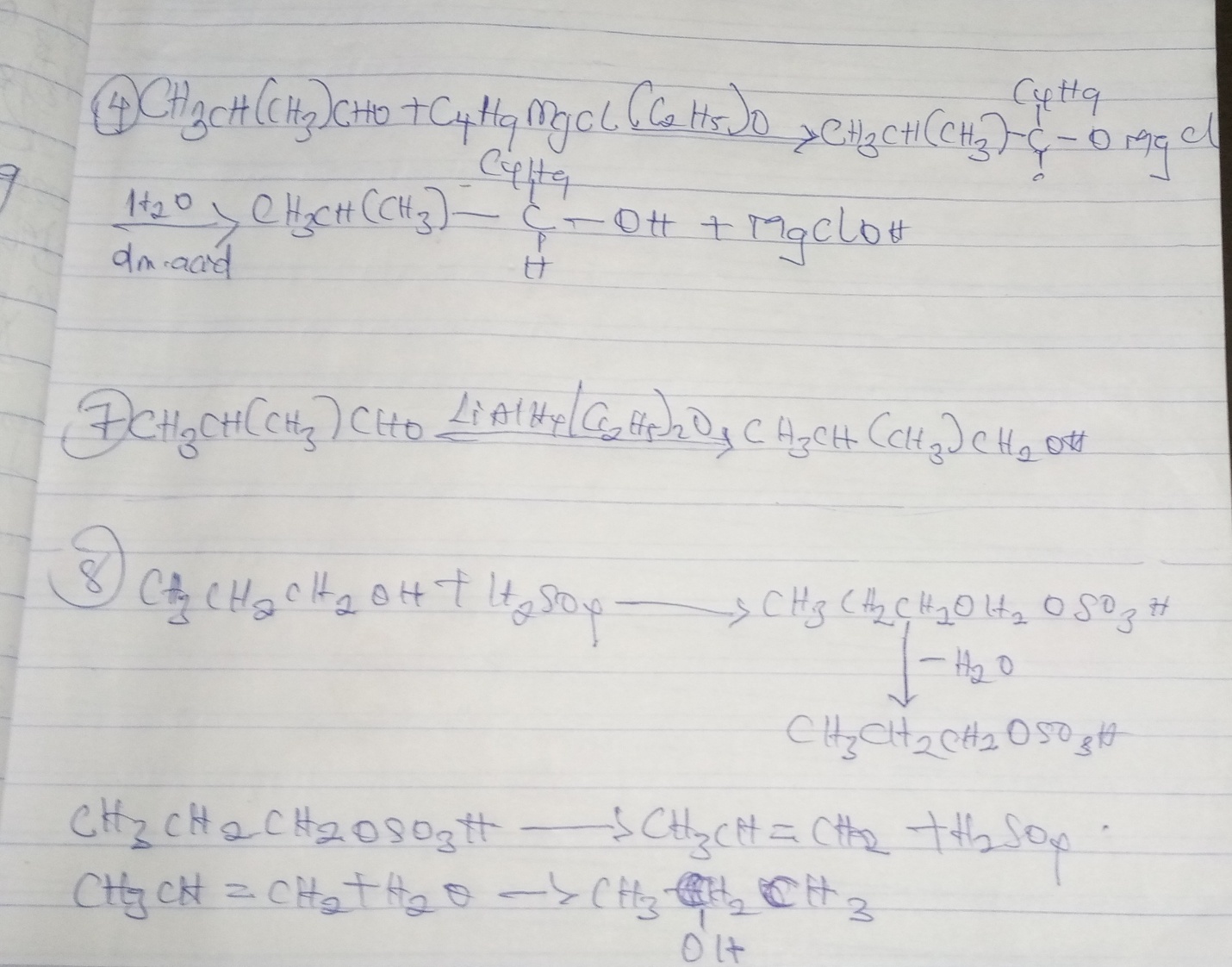
***C12H22O11+H2O------------2C6H22O6.***

***Maltose 15°c/maltase glucose.***

***The glucose at constant temperature of 15°c is the converted into alcohols by the enzymes, zymase contained also in yeast.***

***C6H12O6-----------2CH3CH2OH + 2CO2.***

***Glucose 15°c/zymase ethane.***

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