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DEPARTMENT: PHARMACY

MATRIC NO: 19/MHS11/033

COURSE CODE: CHEM 102

1) a) This is based on the number of groups hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the numbers of hydrogen atom attached to the carbon atom bearing the hydroxy group are one, three or two, it is called primary alcohol, one is called secondary alcohol, zero is called tertiary alcohol. e.g  $\text{CH}_3\text{OH}$  (Methanol) ( $1^\circ$ )

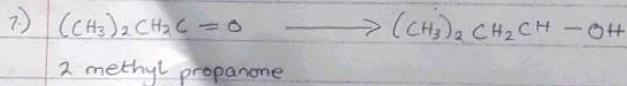
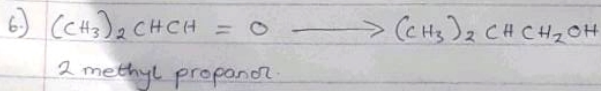
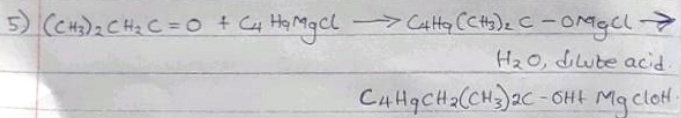
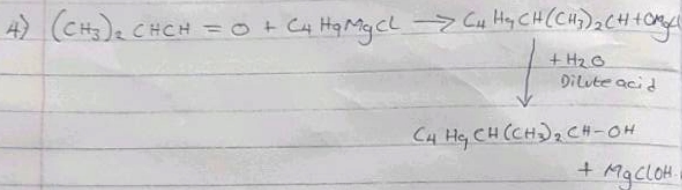
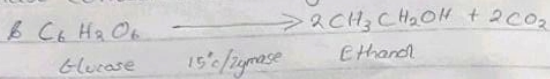
b) This is based on the number of hydroxyl groups they possess. Monohydric alcohols have one hydroxyl group present in the alcohol structure. Dihydric alcohols are also called glycols because of the two hydroxyl groups present in the alcohol structure. Trihydric have three hydroxyl groups present in the alcohol structure.

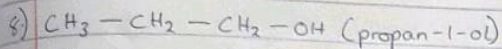
2a) In water:

Lower alcohols with up to three carbon atoms in their molecules are soluble in water because these lower alcohols can form hydrogen bond with water molecules. The solubility of alcohols

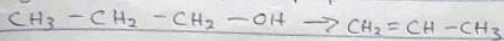


Zymase contained also in yeast.





Heat in the presence of concentrated  $\text{H}_2\text{SO}_4$ , to dehydrate it and form propene ( $\text{CH}_2 = \text{CH} - \text{CH}_3$ )<sub>2</sub>



(after heating with concentrated  $\text{H}_2\text{SO}_4$ ).

Now to propene add water (you may use mercuric acetate as it favours Markownikoff addition).

