

Name: JEKAMI MOBOLAJI DEBORAH

19/MHS01/218

Medicine

Chemistry 102 Assignment.

- 1) Discuss the two major classification of Alkanols. Give two examples of each class.

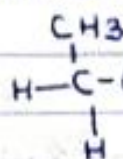
Answer

- a) Classification based on the no of alkyl groups

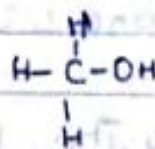
Note; Alkanol has the general formula R-OH

- 1 Primary Alkanol: They have only one alkyl group. E.g;

Ethanol

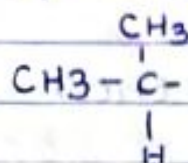


Methanol

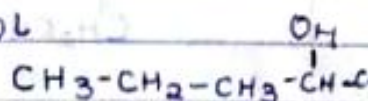


- 2 Secondary Alkanol; They have two alkyl groups or one hydrogen atom attached to the carbon that carries the hydroxyl group. E.g;

Propan-2-ol



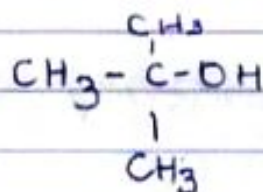
Butan-2-ol



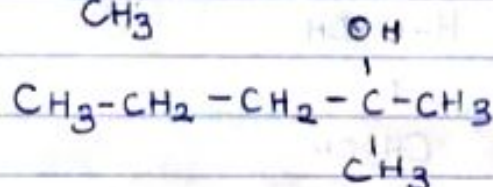
- 3 Tertiary Alkanol: They have three alkyl groups and no hydrogen atom attached to carbon with hydroxyl group.

E.g

2methyl propan-2-ol

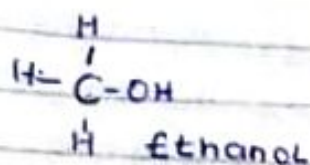


2methyl butan-2-ol



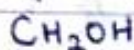
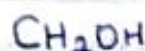
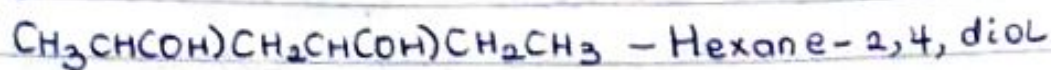
- b) Classification based on the no of hydroxyl group
- Monohydric alkanol; They have only one hydroxyl group

E.g: $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ (Propanol)



ii) Dihydric alkanol: They have two hydroxyl groups present

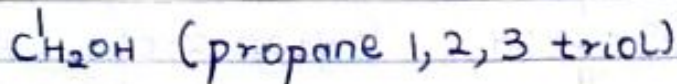
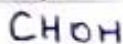
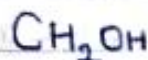
E.g



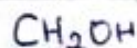
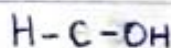
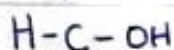
Ethane 1,2 diol.

iii) Trihydric alkanol; they have three hydroxyl groups

E.g



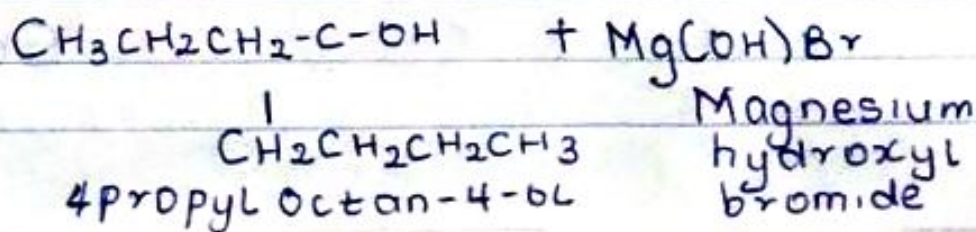
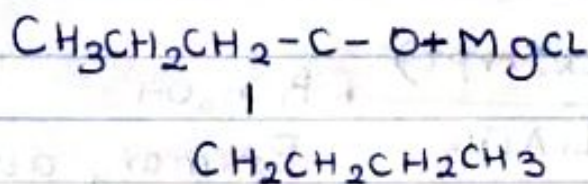
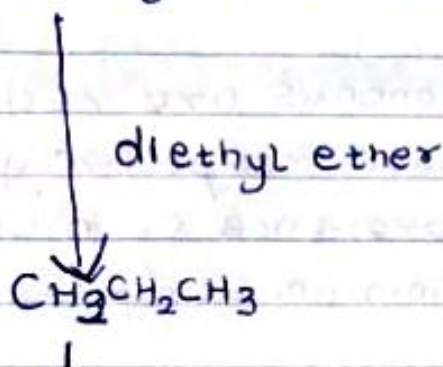
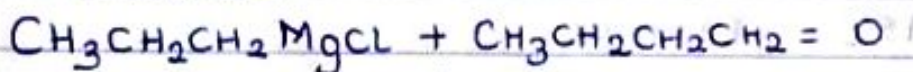
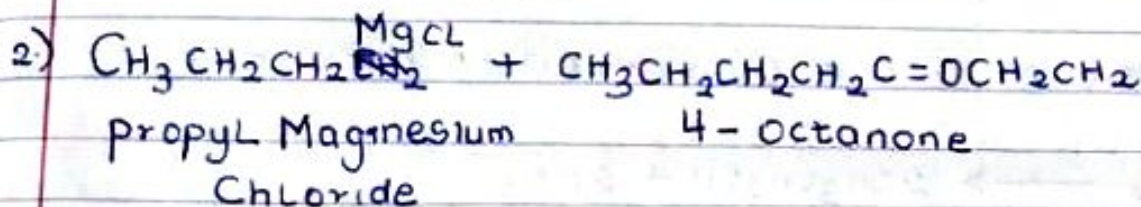
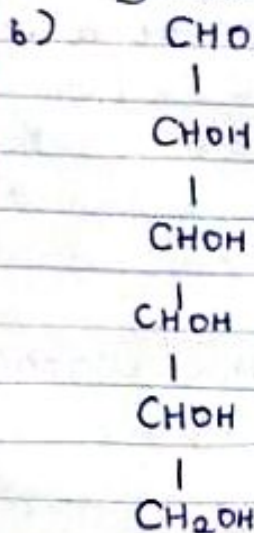
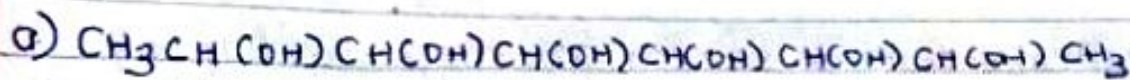
b) CHO



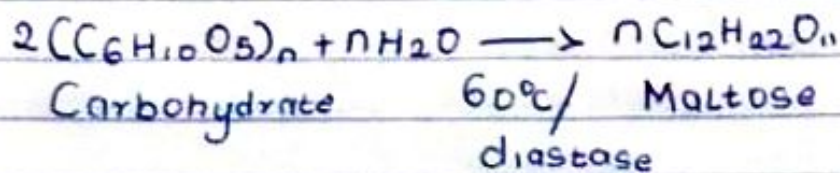
D-glycerol dehyde-

iv, Polyhydric alkanols:

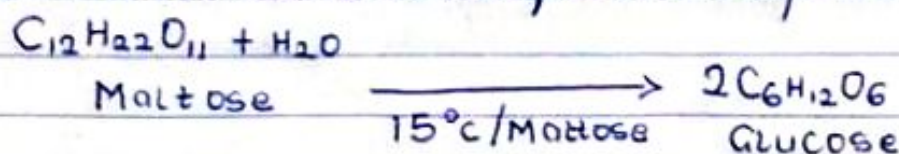
They are those alkanols having more than three hydroxyl groups.



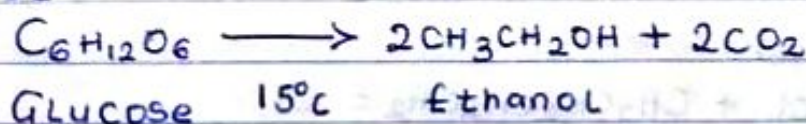
3) Carbohydrate such as starch are major group of natural compounds. It is converted to maltose at a temperature of 60°C by enzyme diastase



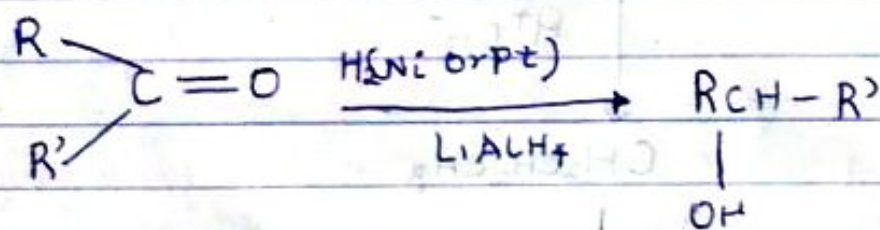
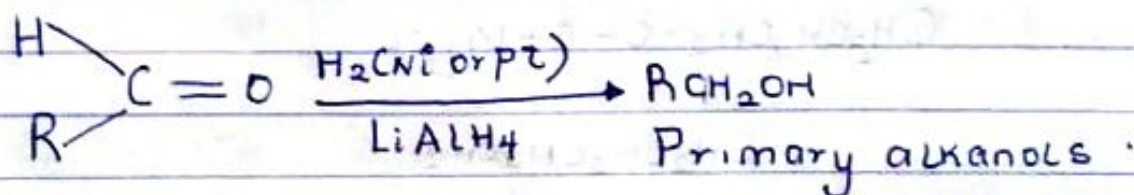
The maltose is broken down into glucose which contains enzyme maltase and at a temperature of 15°C .



The glucose at 15°C is converted to alcohol by Zymase



4) Alkanals and Alkanones are reduced to primary and secondary alkanols respectively by reaction of hydrogen with presence of nickel or platinum catalyst with aluminium compounds.



Secondary alkanols

Specific example;

