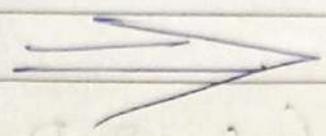


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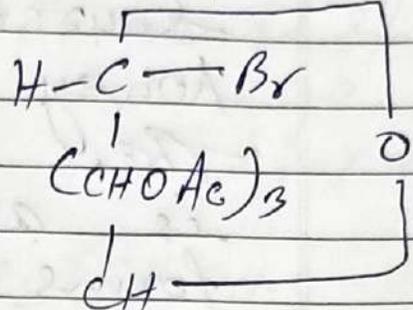
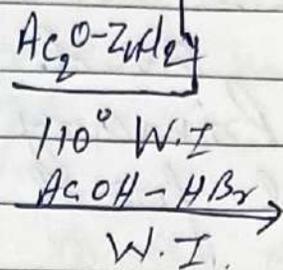
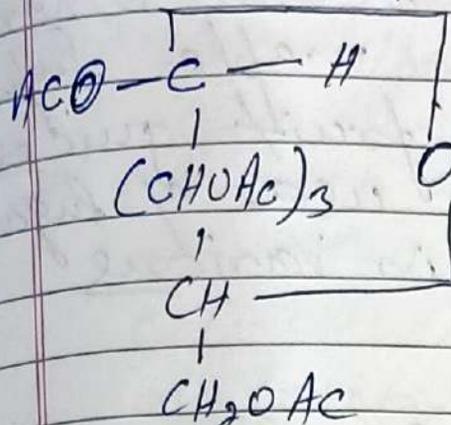
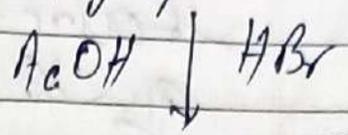
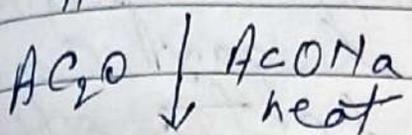
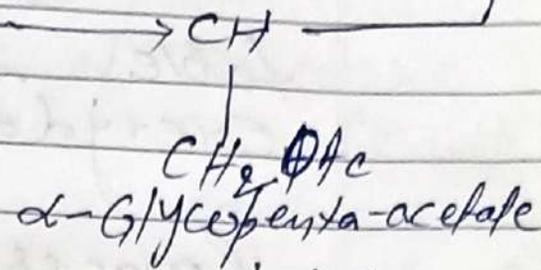
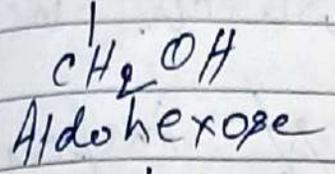
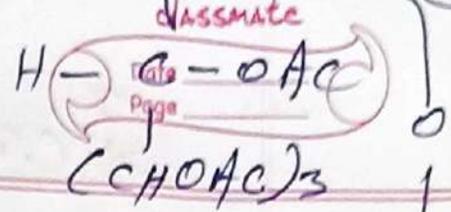
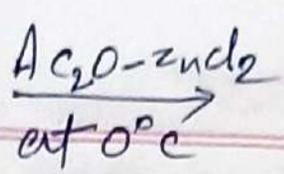
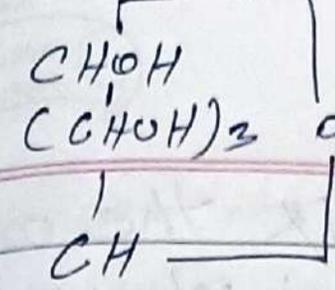
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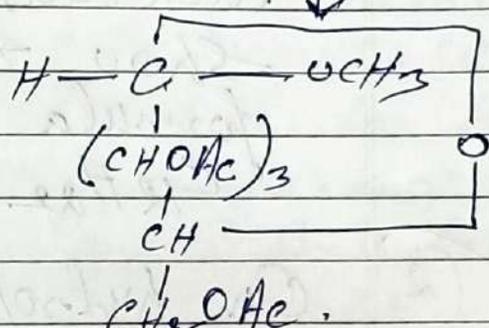
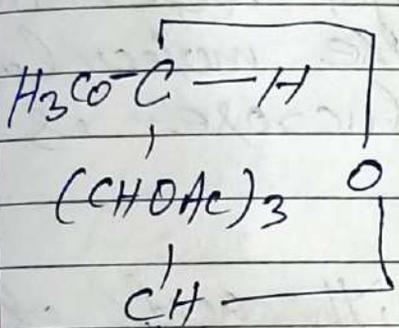
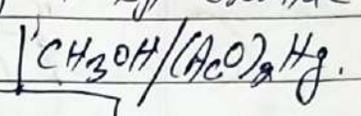
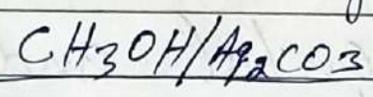
B Synthesis:- The structure of a glycoside established by the above degradation reactions is then confirmed by an unambiguous synthesis. In general, synthesis of a glycoside involves the reaction between an O-acetyl  $\alpha$ -glycosyl bromide and an alcohol or phenol (i.e. the aglycone) in the presence of silver carbonate in anhydrous benzene, generally during the reaction Walden inversion takes place, i.e.  $\beta$ -linked glycosides are produced. On the other hand, if  $\alpha$ -D-glycosides are to be prepared the reaction must be effected in presence of mercuric acetate or ferric chloride.

in place of silver carbonate.  
The required O-acetyl-  
-cosyl bromide is prepared  
from the corresponding sugar.  
The sugar, e.g. an aldohexose  
is acetylated in presence  
of zinc chloride to give  
 $\alpha$  or  $\beta$ -penta-acetate  
which is then treated  
with glacial acetic acid  
saturated with hydrogen  
bromide to form  $\alpha$ -acetobro-  
-mohexose in both the  
cases. i.e. whether the  
penta-acetate is  $\alpha$  or  $\beta$ -



$\beta$ -Glycopenenta-acetate

2,3,4,6-Tetra-O-acetyl- $\alpha$ -glycopyranosyl bromide



$\beta$ -Glycoside

$\alpha$ -Glycoside

Since the glycosidic grouping is stable to alkali, the acetyl groups can be removed by alkaline hydrolysis to give the Glycoside.