

DEGREE-II (HONS.)

1.

29/10/2020

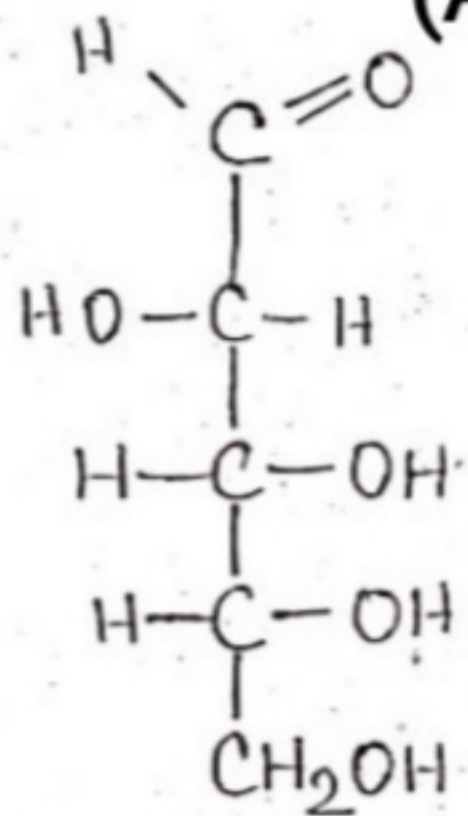
Topic - Interconversion Of Monosaccharides.

Conversion of an Aldose into the next higher Aldose.

(example :- Kiliani-Fischer Cyanohydrin Synthesis)

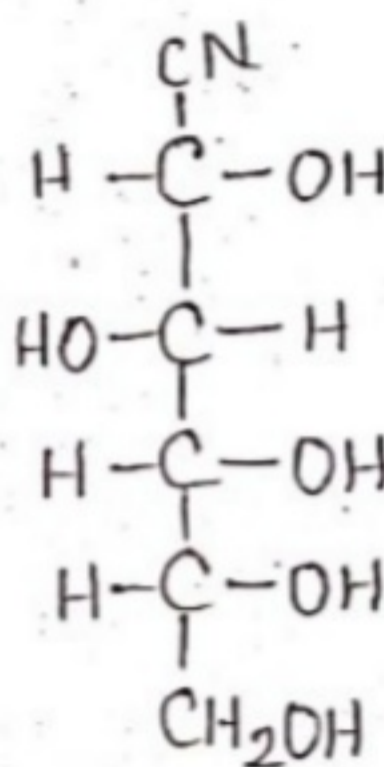
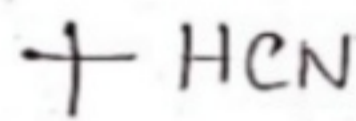
Conversion of D-Arabinose to D-Mannose & D-Glucose

(An Aldopentose to Aldohehexose)

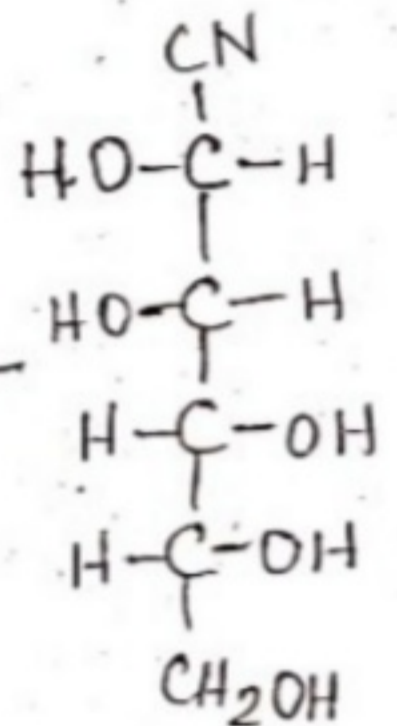


D-Arabinose

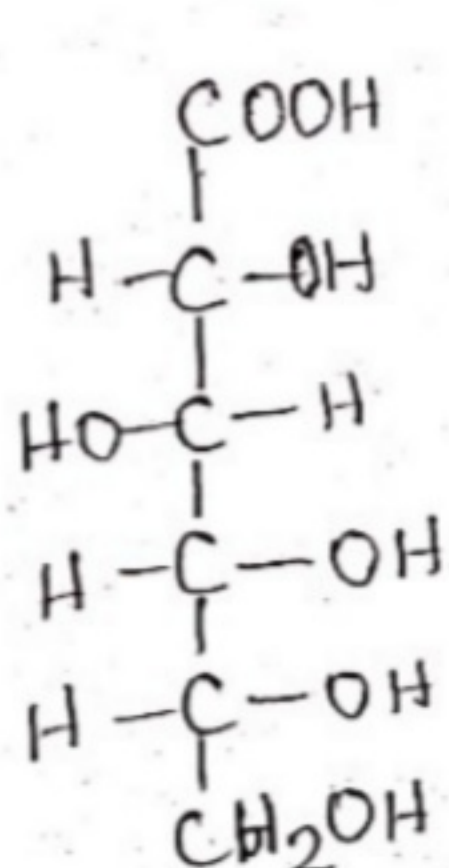
(An aldopentose)



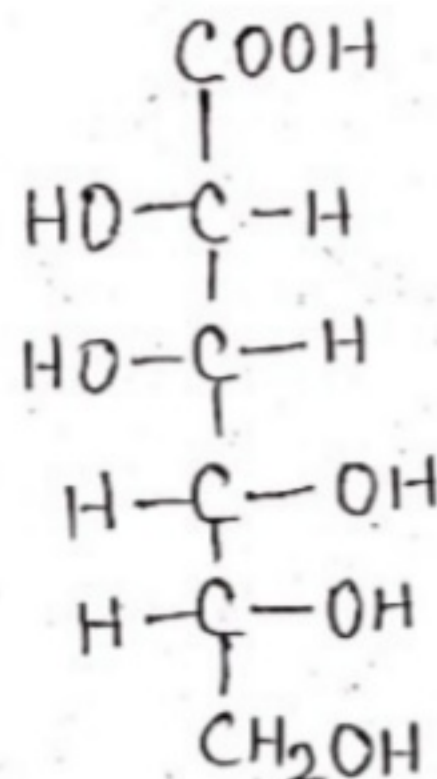
D-Glucononitrile



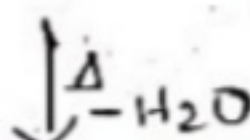
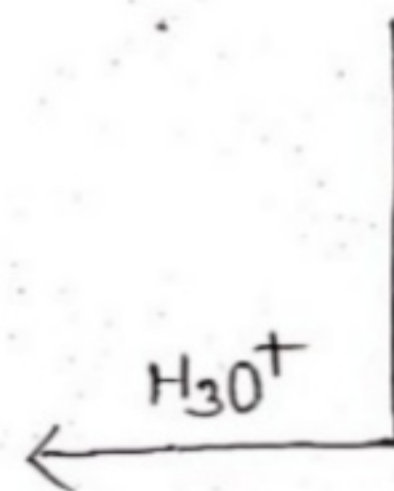
D-mannonitrile



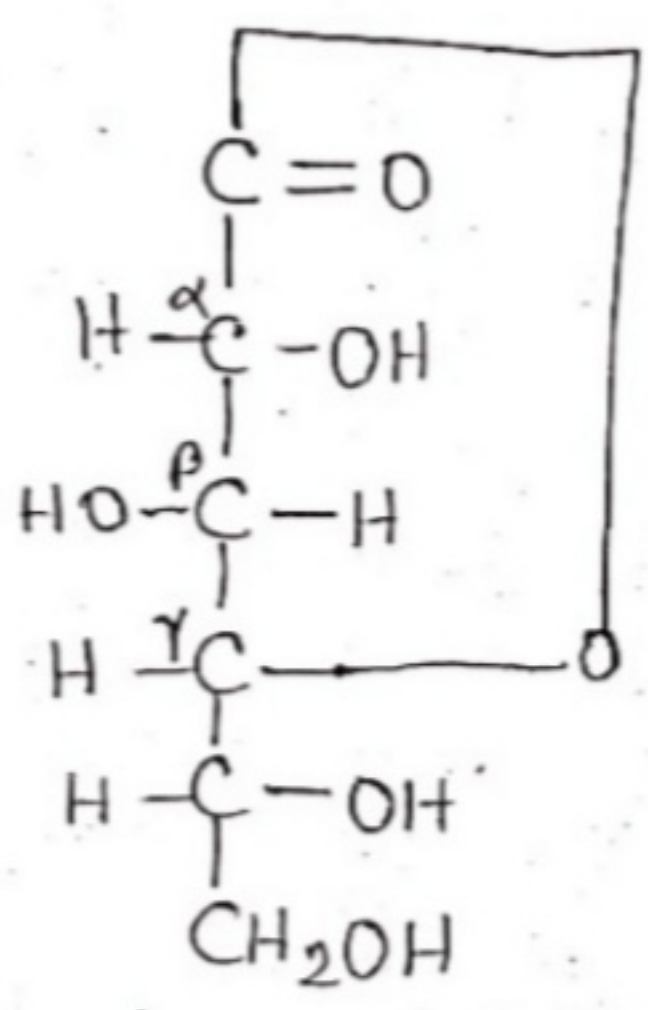
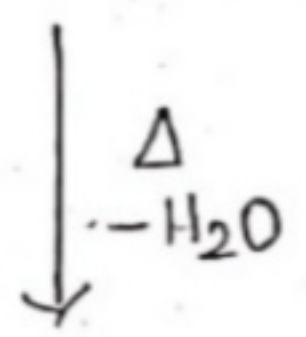
D-Gluconic acid



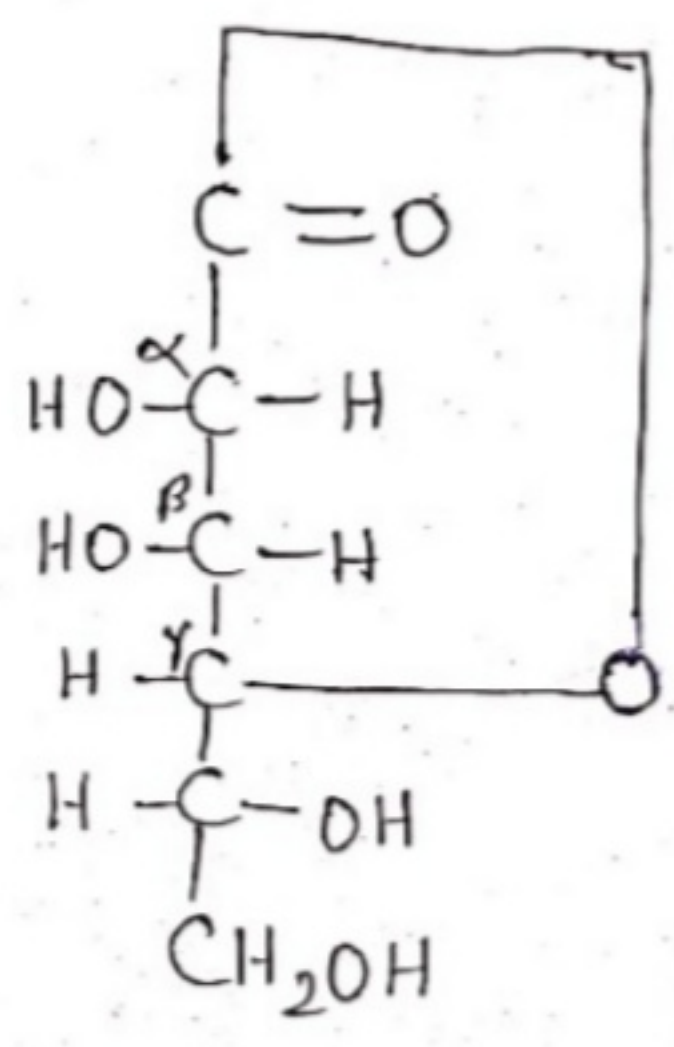
D-Mannonic acid



By-Dr.Rinky

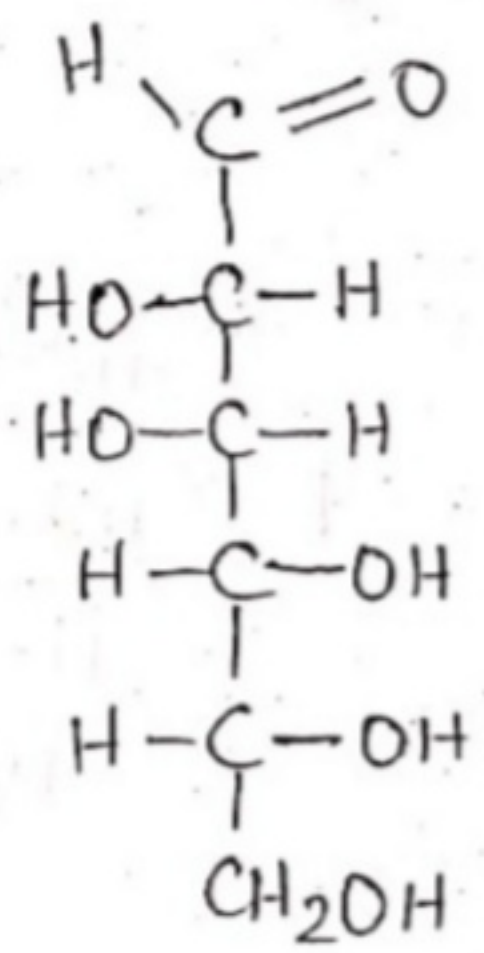
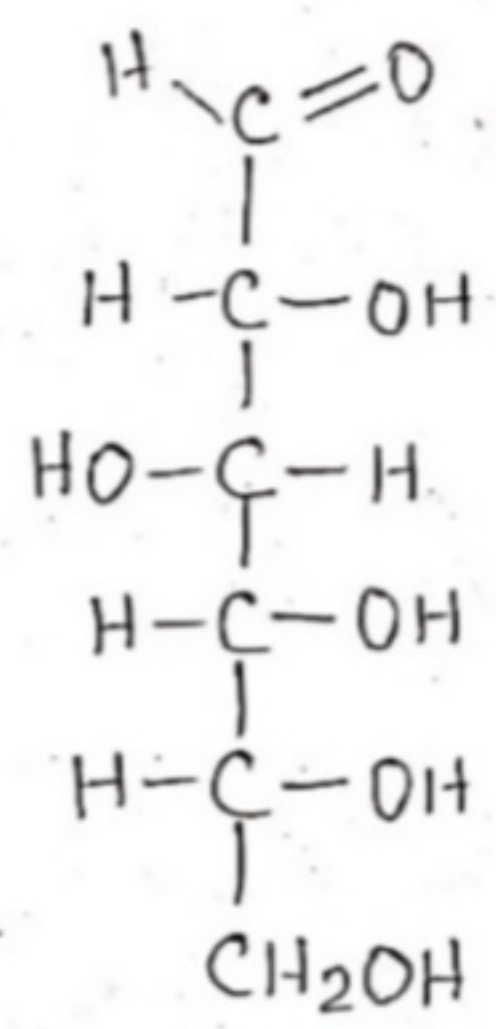
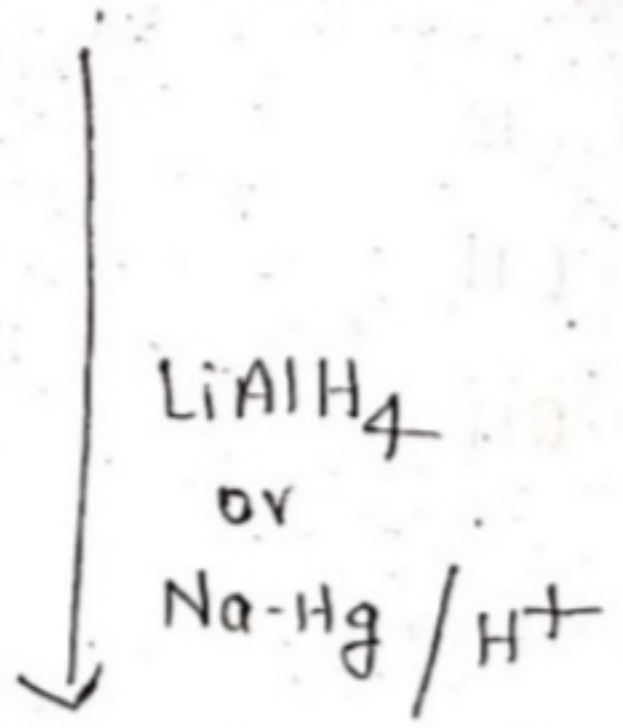
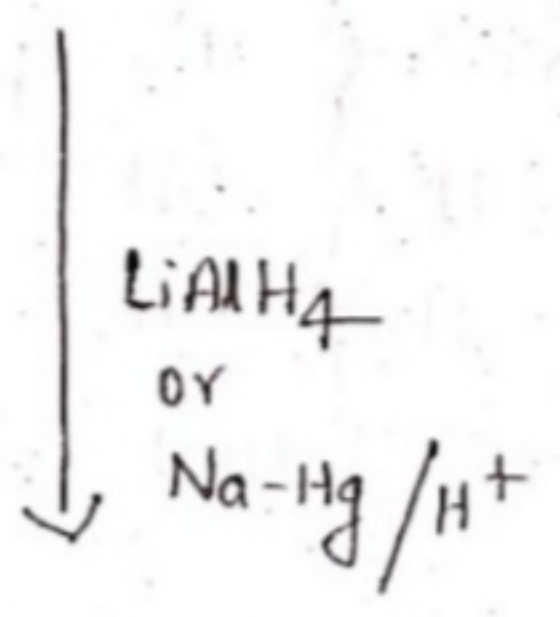


+



γ -D-Gluconolactone

γ -D-Mannonolactone

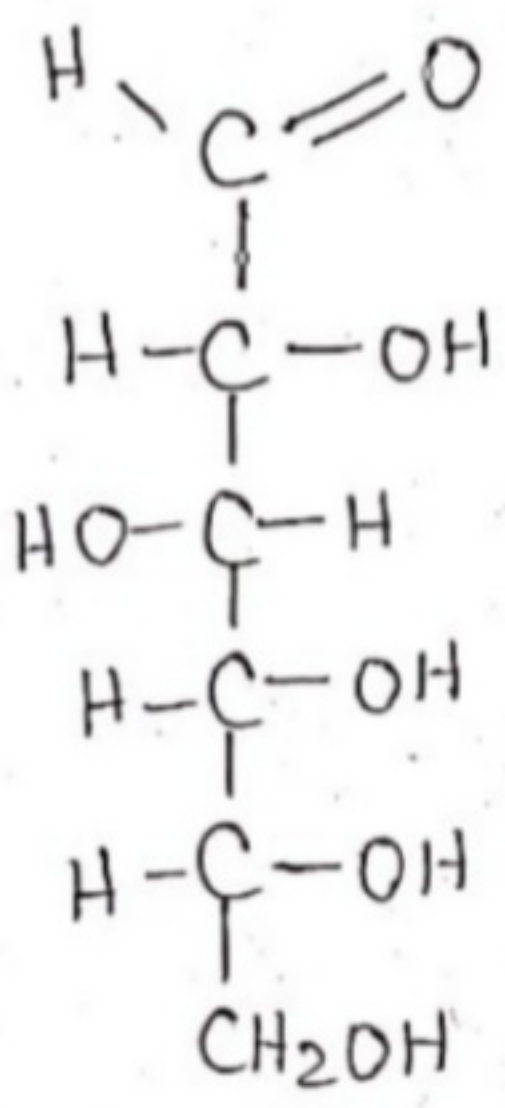


D-Glucose

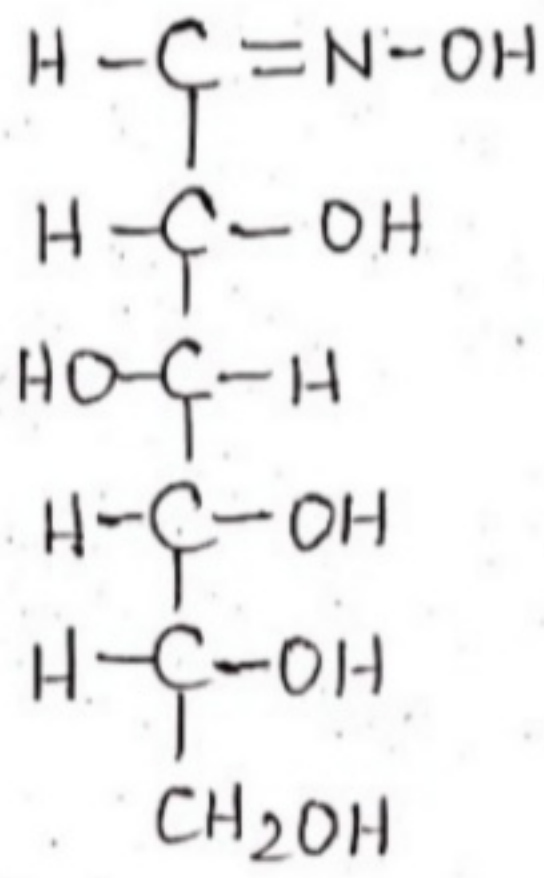
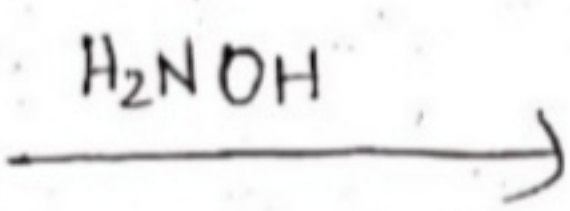
D-mannose

Conversion of An Aldose to the next Lower Aldose

WOHL METHOD

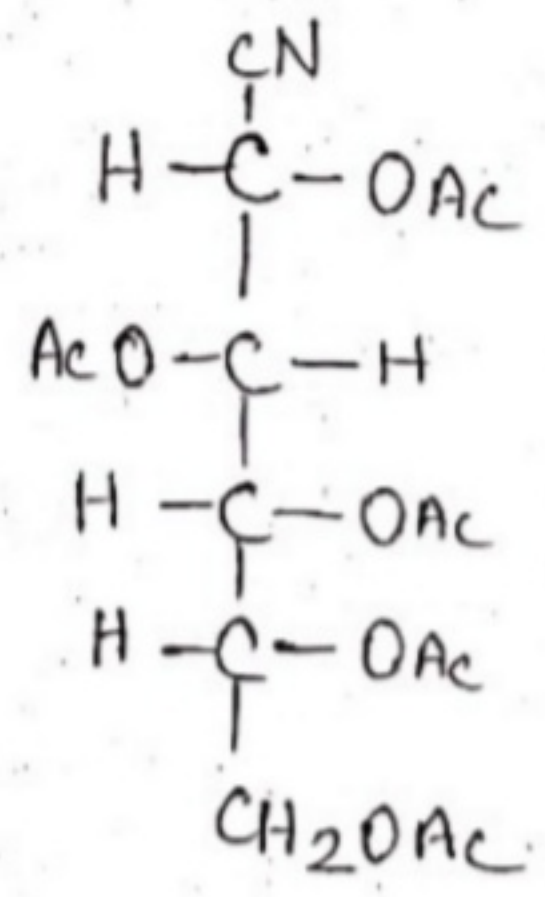
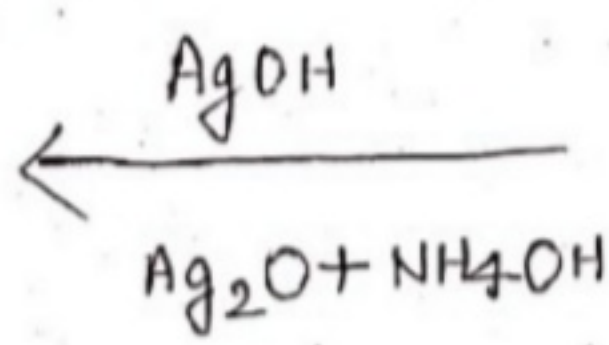
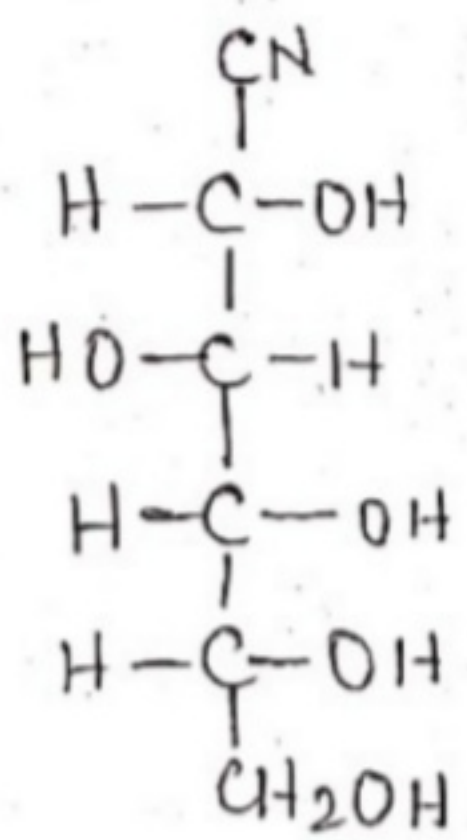
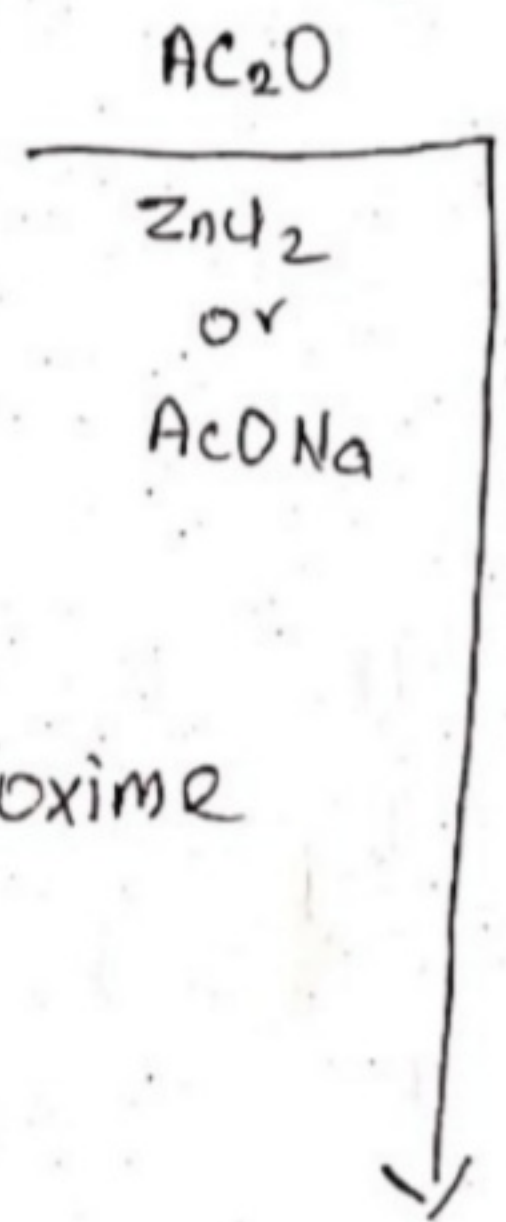


D-Glucose

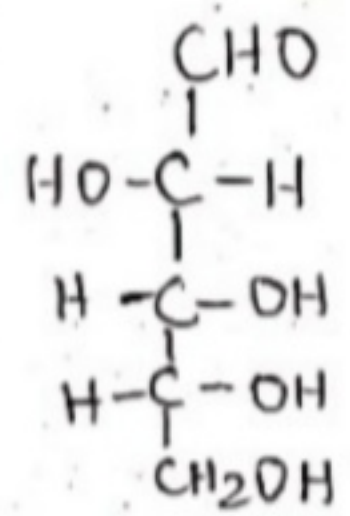
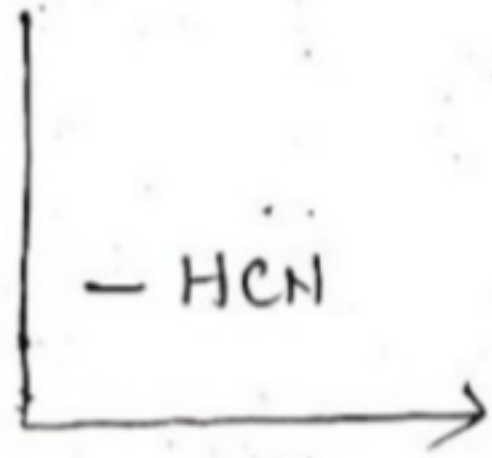


D-Glucose Oxime

(Ac = CH₃CO-)



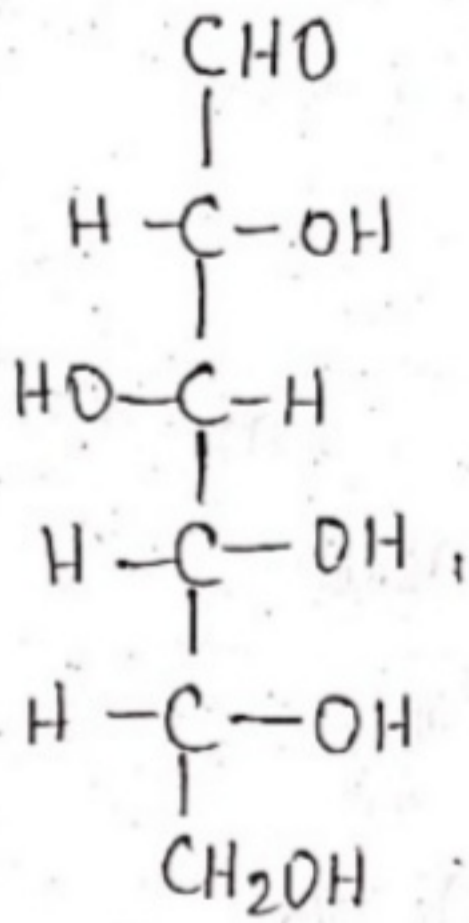
D-Glucononitrile Pentaacetate



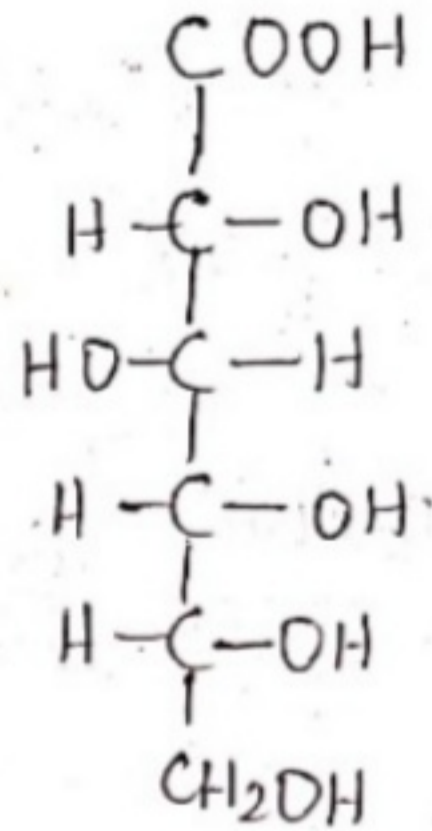
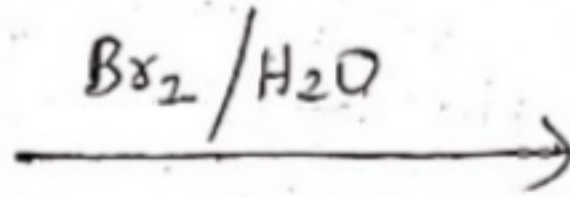
D-Arabinose (An Aldopentose)

Ruff's Method

4.

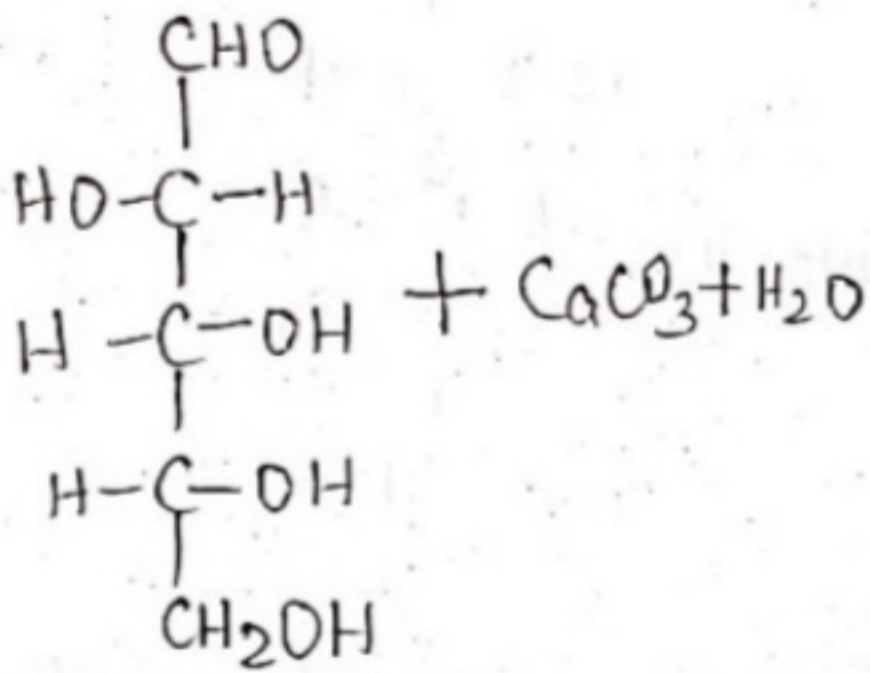


D-Glucose
(An Aldohexose)



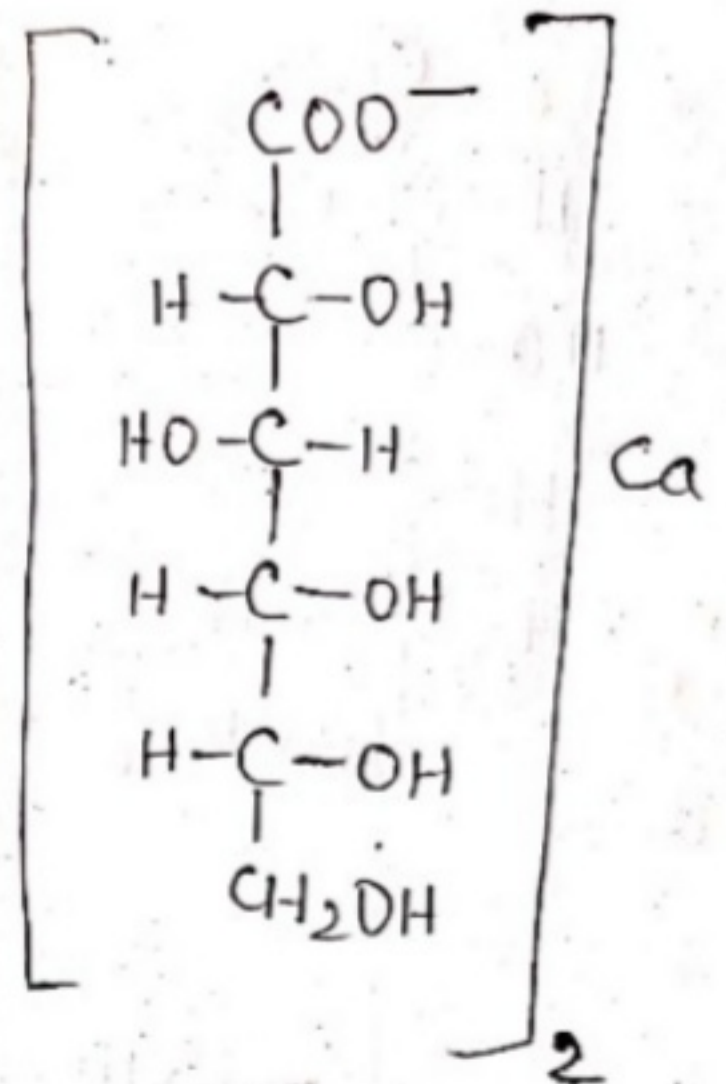
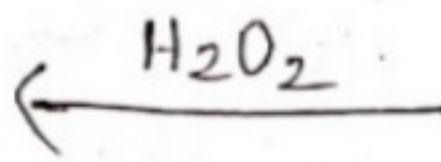
D-Gluconic acid

CaCO_3



D-Arabinose

An Aldopentose.



Calcium D-Gluconate

completed.