

## Question no 6

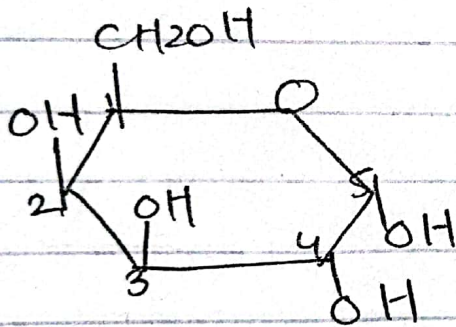
b) Name the epimers of d-glucose.

Ans:

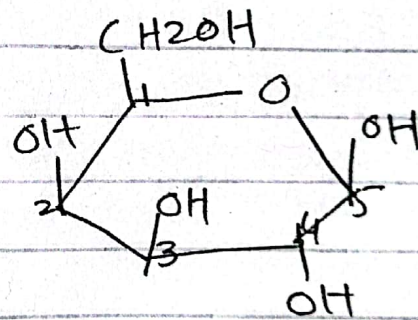
1) - D-galactose.

This epimer differs from D-glucose only in the configuration of hydroxyl group at the C-4 carbon. In D-glucose, hydroxyl group at C-4 is on right while in D-galactose it is on the left.

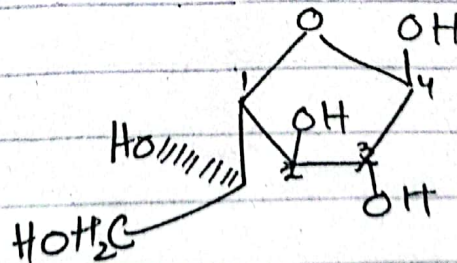
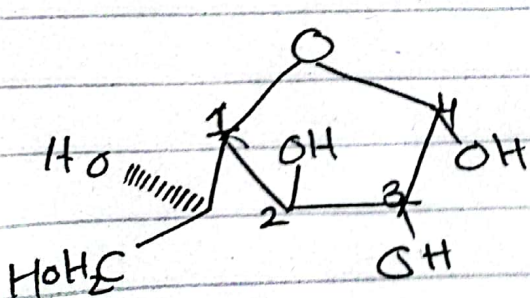
For example:



$\alpha$ -D-Galactopyranose



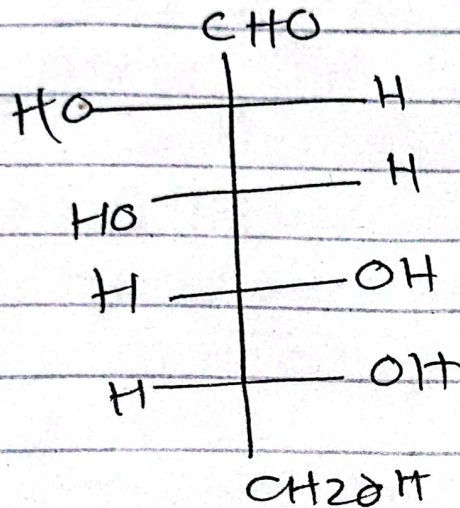
$\beta$ -D-Galactopyranose



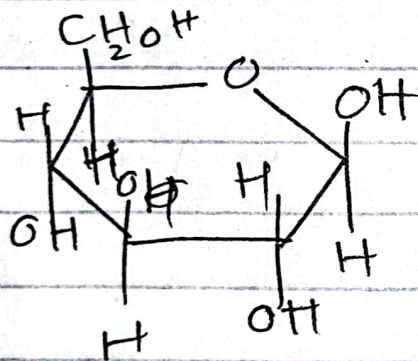
2) D-mannose ∴

This epimer differs from D-glucose in the configuration

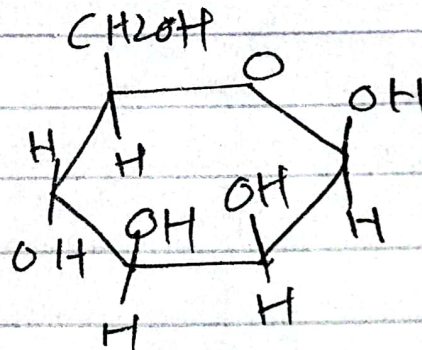
of hydroxyl group at C-2 carbon. In D-glucose, the OH-group at C-2 is on right, while in D-mannose, it is on the left.  
 For example:



(an Fischer projection)  
 D-mannose  
 structure



( $\alpha$ -D-glucose)



(D-mannose)