

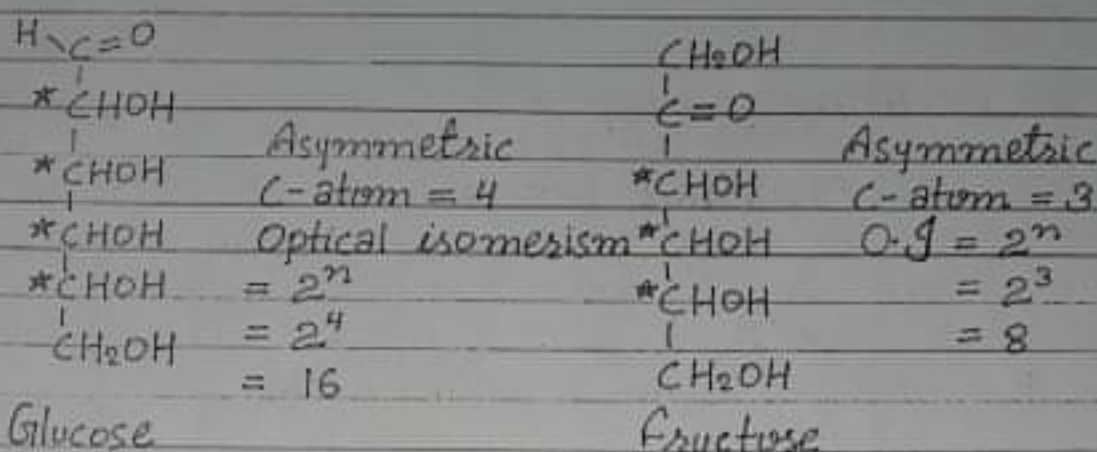
Isomerism of Carbohydrates:

85

Each carbohydrate mols. have asymmetric C-atoms. Due to presence of asymmetric C-atom, carbohydrate molecule shows optical isomerism.

No. of optical isomerism = 2^n

Where, n is the asymmetric C-atom



All carbohydrates exist in two forms in plane polarised light.

The enantiomers rotate the plane of polarised to the right^o written as (+). The other enantiomers that rotate the plane of polarised to the left is written as (-). The (+) and (-) sign only specify the direction of rotation of plane polarised light by particular enantiomers. But it does not give any indication the arrangement of -OH group and atom around the asymmetric C-atom.

The sugars are divided into two types of Family — (i) D family and (ii) L family. D family dextro rotatory (+) sign and L family laev laevorotatory (-) sign.