

Prostereoisomerism, Prochirality, Topicity

Class-3

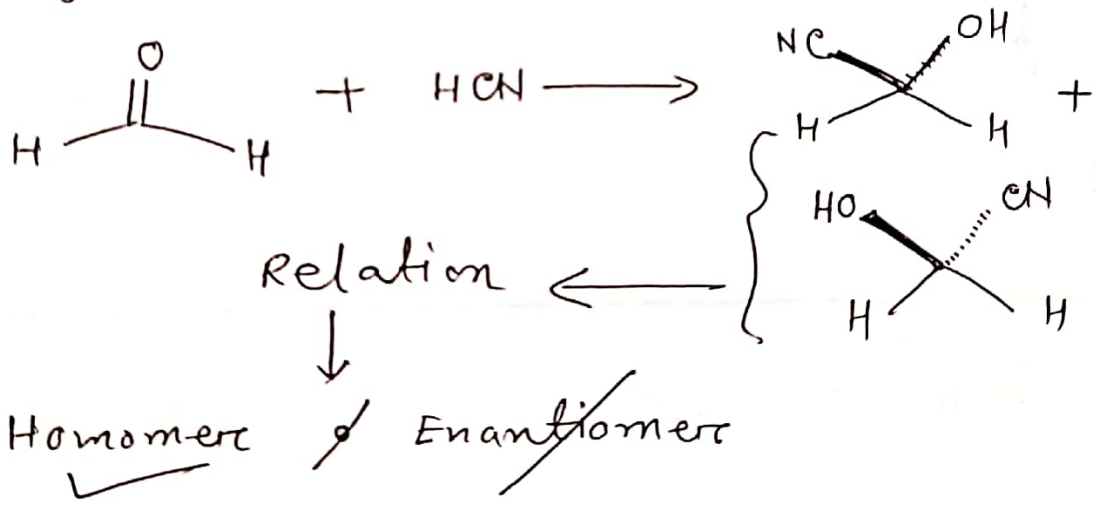
(2nd Semester)

In previous class we discussed about enantiotopic face, Re/Si face.

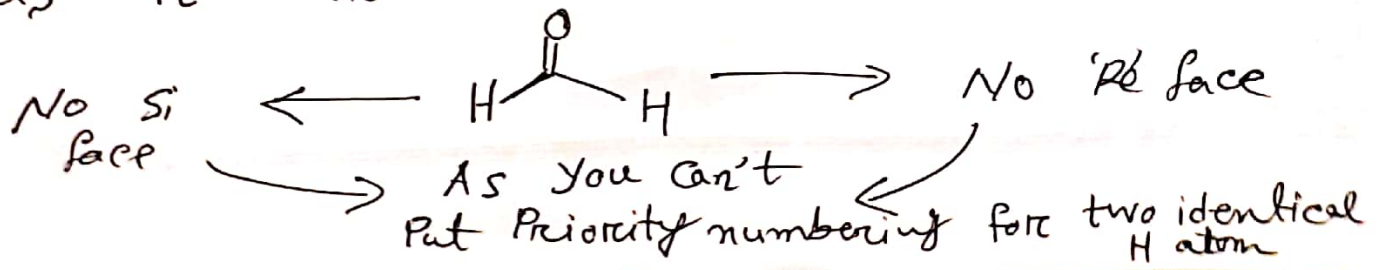
Today we will discuss two other faces namely homotopic face and diastereotopic face.

Now Re/Si face concept is related to both enantiotopic and diastereotopic face not for homotopic face

Homotopic face : It can be explained taking following example

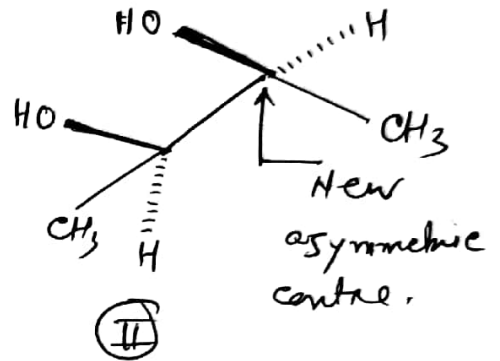
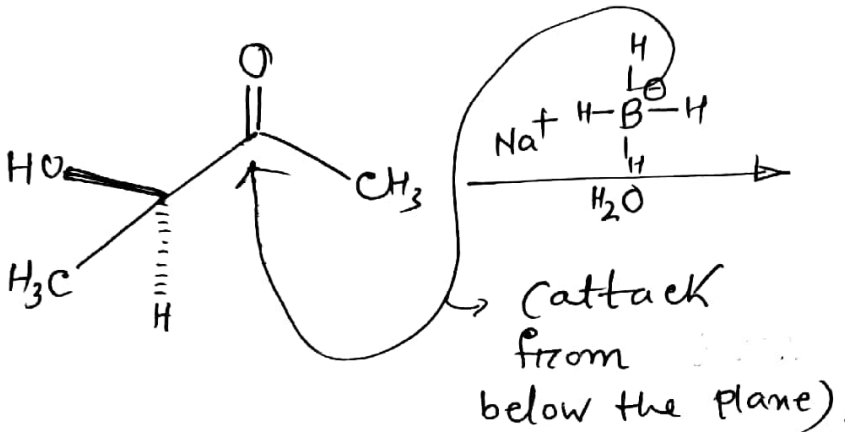
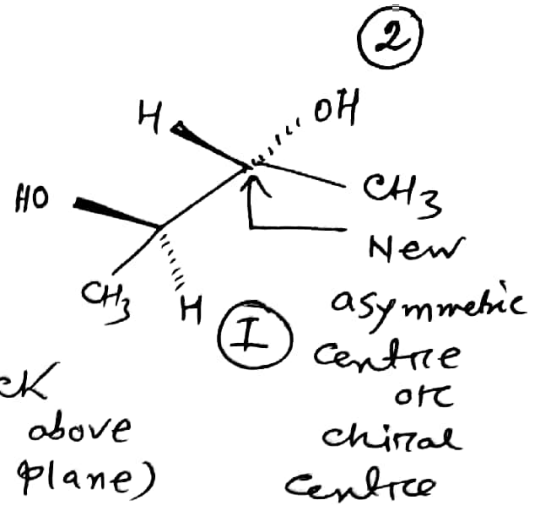
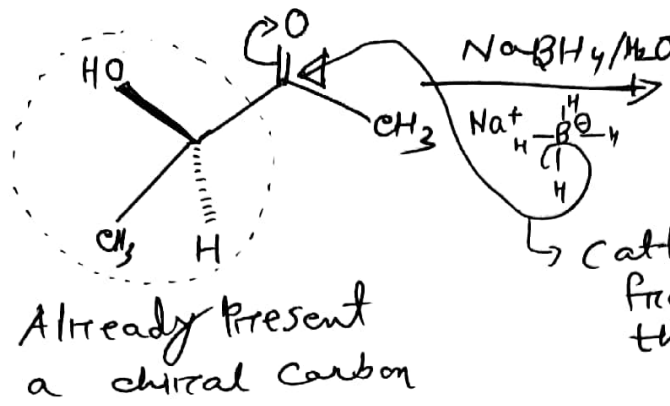


So top face or bottom face where from $^{\ominus}\text{CN}$ attack are homotopic face as it produce homomers or identical



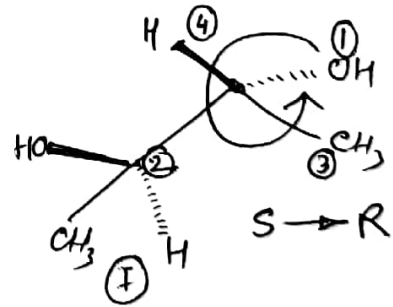
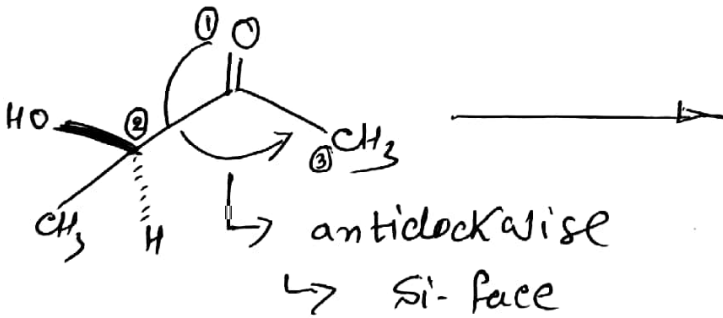
Diastereotopic face

e.g.



Now structure I & II → Diastereomers
(no mirror image and also non-superimposable)
(because of two chiral carbon)

In first case attack takes place from above the plane.



Si face attack gives → 'R' at new chiral centre

In 2nd case attack takes place from below the plane.

