147.(A) trans-2-ene + Br$_2$ $\longrightarrow$ meso ; cis-but-2-ene + Br$_2$ $\longrightarrow$ racemic mixture

148.(CD)

149.(D)

Markovnikov's addition

Anti-Markovnikov's addition

150. (a)

2, 3-dihydroxy butane
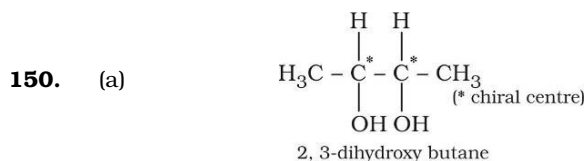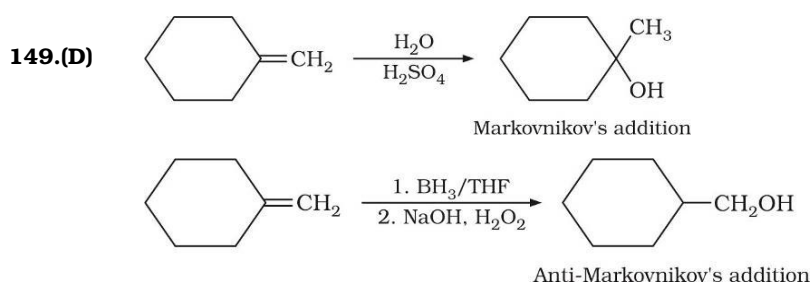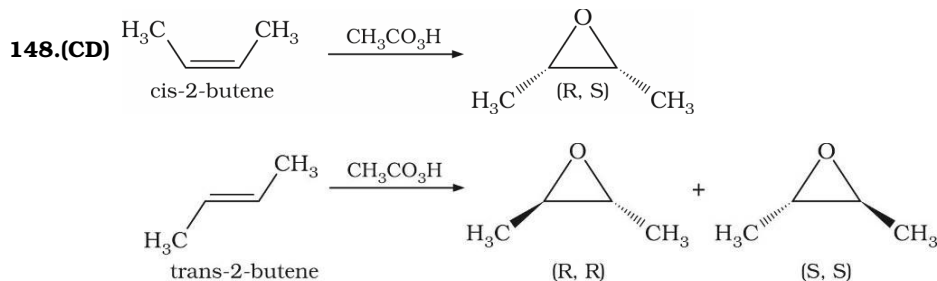
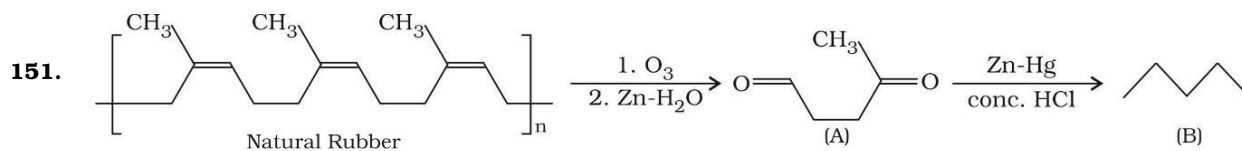2 chiral centres are present. But it has plane of symmetry. So total no. of stereoisomers = 3. These are given below.

I is Meso compound   II & III exist as enantiomers
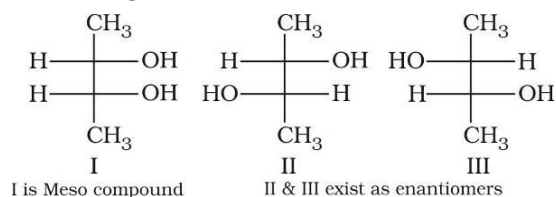
∴   Two (II & III) are optically active and (I) is optically inactive

(b)

151.
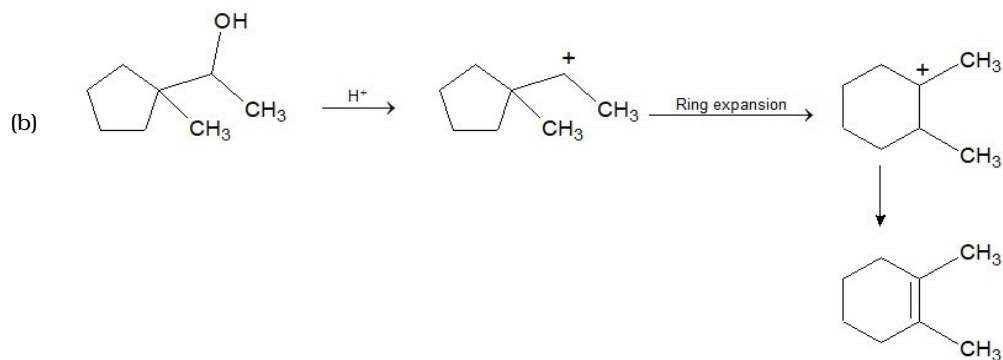
152. The 6 different alkenes (A) to (F) are

A =

B =

C =

D =

E =

F =

G =