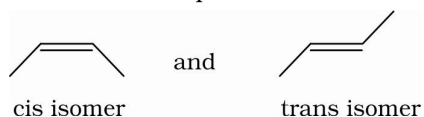
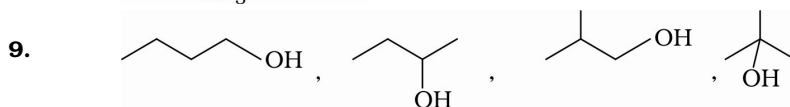


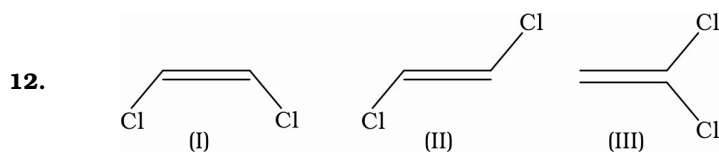
- 1.(D) Ethanol shows only functional isomerism. Its isomer is dimethyl ether.
- 2.(A) Rotation is restricted about multiple bond, and rotation is free about single bond between polyvalent atoms having smaller groups.
- 3.(D) Butanone is C_4H_8O while diethylether is $C_4H_{10}O$.
4. cyclopropane
5. $CH_3 - CH_2 - CH_3$ (all sp^3), $CH_3 - CH = CH_2$ (sp^3 and sp^2), $CH_2 = C = CH_2$ (sp^2 and sp)
6. Stability of carbonium ion \propto number of hyper conjugative H atoms. Tert-butyl carbonium ion is most stable.
- 7.(A) 2-Butene due to presence of a double bond at appropriate position.



- 8.(C) $\begin{array}{c} CH_3 \\ | \\ CH_3 - C - CH_2 - CH_2 \\ | \\ CH_3 \end{array}$ 3, 3-Dimethyl but-1-ene



10. sp^3
- 11.(F) m-chlorobromobenzene and m-bromochlorobenzene are same compounds.



(I) and (II) are geometrical isomers while (III) is structural isomer of (I) and (II).
Dipole moment of (II) is zero.

13. A geminal diol has two hydroxyl groups on same carbon atoms.
A vicinal diol has two hydroxyl groups on adjacent carbon atoms.

- 14.(B) $\begin{array}{c} 1 \quad 2 \quad 3 \quad 4 \\ CH_2 = CH - CH - CH_3 \\ | \\ CH_3 \end{array}$ 3-Methyl but-1-ene

- 15.(C) $N \equiv C - CH = CH_2$
sp sp sp^2 sp^2