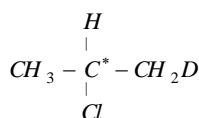
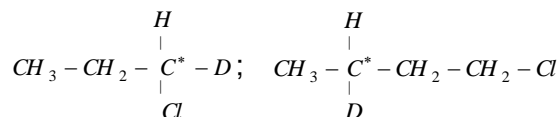


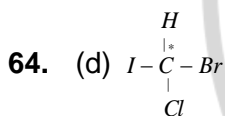
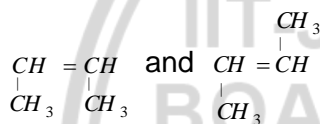
Structural and stereo isomerism

61. (b) $C_6H_5C \equiv N$ and $C_6H_5N \equiv C$ are functional isomers.

62. (a) $DCH_2-CH_2-CH_2-Cl$ Others are chiral



63. (d) Cis and trans 2-butene are geometrical isomers.



A carbon atom which is attached to four different atoms or groups is called a chiral or asymmetric carbon atom. such a carbon atom is often marked by an asterisk.

65. (b) $R-\overset{\text{Cyanide}}{C} \equiv N$ and $R-\overset{\text{Isocyanide}}{N} \equiv C$ are functional isomers.

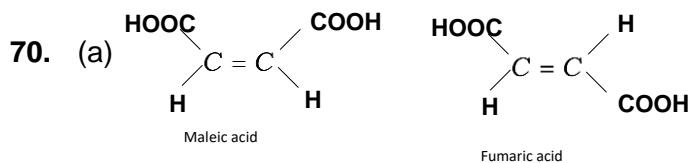
66. (b) Glucose and fructose have similar molecular formula with difference of functional group, so they are functional isomers.

67. (b) 2-butanol ($CH_3-\underset{\underset{OH}{|}}{CH}-CH_2-CH_3$) is optically active because it has asymmetric carbon atom.

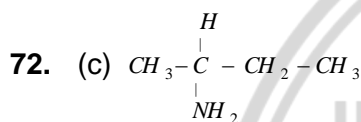
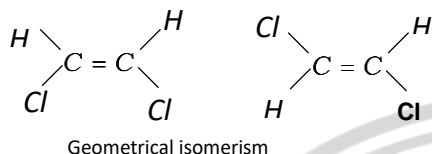
68. (a) Enantiomers

69. (d) Ethane has all single (σ) bonds so there is minimum resistance in bond rotation.



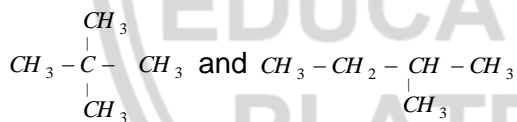


71. (a) $\text{CHCl} = \text{CHCl}$ two structures are possible



Secondary butyl amine is optically active.

73. (c) Neopentane and isopentane are chain isomers.



74. (a) An asymmetric carbon atom

75. (a) Due to single bond there is no hindrance

76. (d) 2-methyl butane and neopentane

77. (a) Only 1-phenyl-2-butene will exhibit *cis-trans* isomerism.

78. (b) Optical isomers



79. (a) Geometrical isomerism is not possible in propene.

80. (a) Two isomeric forms are possible for 2-methyl propane.

