Structural and stereo isomerism

61. $C_6H_5C \equiv N$ and $C_6H_5N \equiv C$ exhibit which type of isomerism

(a) Position

(b) Functional

(c) Dextro isomerism

(d) Metamerism

62. Which of the following compounds is not chiral

(a) $DCH_2CH_2CH_2Cl$

(b) CH_3CH_2CHDCl

(c) $CH_3CHDCH_2CH_2Cl$

(d) $CH_2CHClCH_2D$

63. *cis* and *trans* 2-butene are

(a) Conformational isomers

(b) Optical isomers

(c) Position isomers

(d) Geometrical isomers

64. Which one of the following is the chiral molecule

(a) CH_3Cl (b) CH_2Cl_2

(c) $CHBr_3$ (d) $CHClBrI$

65. Cyanide and isocyanide are isomers of type

(a) Positional (b) Functional

(c) Tautomer (d) Structural

66. Glucose and fructose are

(a) Optical isomers

(b) Functional isomers

(c) Position isomers

(d) Chain isomers

67. Which of the following compounds which is an optically active compound

(a) 1-butanol (b) 2-butanol

(c) 3-butanol (d) 4-heptanol

68. *d*-tartaric acid and *l*-tartaric acid are

(a) Enantiomers

(b) Tautomers

(c) Diastereoisomers

(d) Structural isomers

69. Minimum resistance in bond rotation will be observed in the compound

(a) Hexachloroethane

(b) Ethylene

(c) Acetylene

(d) Ethane

70. Which pair show cis-trans isomerism

(a) Maleic-fumaric acid

(b) Lactic-tartaric acid

(c) Malonic-succinic acid

(d) Crotonic-acrylic acid

71. 1, 2-Dichloroethene shows

(a) Geometrical isomerism

(b) Optical isomerism

(c) Ring-chain isomerism
(d) Resonance

72. Which compound is optically active
(a) 4-chloro, 1 hydroxy butane
(b) 3^{o} -butyl alcohol
(c) Secondary butyl amine
(d) *n*-butyl alcohol

73. Choose the pair of chain isomer
(a) CH_3CHBr_2 and CH_2BrCH_2Br
(b) 1-propanol and 2-propanol
(c) Neo-pentane and isopentane
(d) Diethyl ether and methyl-*n*-propyl ether

74. Optical isomerism arises due to the presence of
(a) An asymmetric carbon atom
(b) Centre of symmetry
(c) Axis of symmetry
(d) Plane of symmetry

75. Least hindered rotation about carbon-carbon bond is observed in
(a) Ethane
(b) Ethylene
(c) Ethyne
(d) Hexachloroethane

76. Which pair represents chain isomer
(a) CH_3CHCl_2 and $ClCH_2CH_2Cl$
(b) *n*-propyl alcohol and isopropyl alcohol
(c) 2-methyl-1 propanol and 2-Methyl-2 propanol
(d) 2-methyl butane and neopentane

77. Which of the following compounds will exhibit geometrical isomerism
(a) 1-phenyl-2-butene
(b) 3-phenyl-1-butene
(c) 2-phenyl-1-butene
(d) 1, 1-Diphenyl-1-propene

78. On bromination, propionic acid yields two isomeric 2-bromopropionic acids. This pair is an important example of
(a) Chain isomers
(b) Optical isomers
(c) Cis-trans isomers
(d) Position isomers

79. Geometrical isomerism is not possible in
(a) Propene
(b) 3-hexane
(c) Butenedioic acid
(d) Cyclic compound

80. Only two isomeric monochloro derivatives are possible for
(a) 2-methyl propane
(b) *n*-pentane
(c) Benzene

(d) 2, 4-dimethyl pentane