

Structural and stereo isomerism

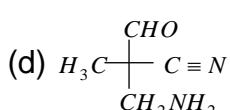
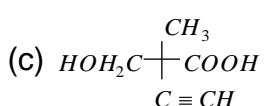
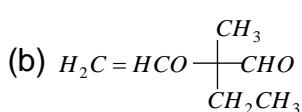
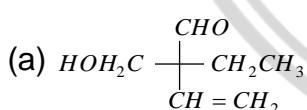
81. Lactic acid in which a methyl group, a hydroxyl group, a carboxylic acid group and a hydrogen atom are attached to a central carbon atom, shown optical isomerism due to the molecular geometry at the

- (a) Central carbon atom
- (b) Carbon atom of the methyl group
- (c) Carbon atom of the carboxylic acid group
- (d) Oxygen of the hydroxyl groups

82. The number of possible alkynes with molecular formula C_5H_8 is

- (a) 2
- (b) 3
- (c) 4
- (d) 5

83. Which of the following will not lose asymmetry on reduction with $LiAlH_4$



84. Reason for geometrical isomerism by 2-butene is

- (a) Chiral carbon
- (b) Free rotation about single bond
- (c) Free rotation about double bond
- (d) Restricted rotation about double bond

85. Stereoisomers which are not the mirror images of one another are called

- (a) Enantiomers
- (b) Mesomers
- (c) Tautomers
- (d) Diastereoisomers

86. The isomerism shown by *n*-butyl alcohol and isobutyl alcohol is

- (a) Metamerism
- (b) Chain
- (c) Position
- (d) Stereo

87. Which is optically active

- (a) CH_2Cl_2
- (b) $CHCl_3$
- (c) Meso form of tartaric acid
- (d) Glyceraldehyde

88. Which of the following will show geometrical isomerism

- (a) $CH_3CH = CHCH_3$
- (b) $(CH_3)_2C = C(CH_3)_2$
- (c) $(CH_3)_2C = C(CH_3)_2$



(d) $CH_3 - CH = C(CH_3)_2$

89. What is the maximum number of open chain structures possible for C_4H_8

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|-------|-------|
| (a) 2 | (b) 3 |
| (c) 4 | (d) 1 |

(b) Optically active because of molecular symmetry

(c) Optically inactive due to external compensation

(d) Optically active because of asymmetric carbon atom

90. Glucose has optical isomers

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|-------------------------|
| (a) 8 |
| (b) 12 |
| (c) 16 |
| (d) Cannot be predicted |

94. The number of possible isomers of the compound with molecular formula C_7H_8O is

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|-------|-------|
| (a) 3 | (b) 5 |
| (c) 7 | (d) 9 |

91. An organic compound



To make it chiral compound the attack should be on which carbon atom

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|-------|-------|
| (a) 1 | (b) 3 |
| (c) 4 | (d) 7 |

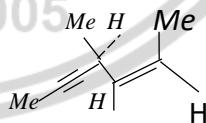
95. The number of isomers for the compound with molecular formula $C_2BrClFI$ is

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|-------|-------|
| (a) 3 | (b) 4 |
| (c) 5 | (d) 6 |

92. Which of the following statements is not true about enantiomers

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|---|
| (a) They have same physical properties |
| (b) They have different biological properties |
| (c) They have same chemical properties towards chiral compounds |
| (d) None of these |

96. Hydrogenation of the adjoining compound in the presence of poisoned palladium catalyst gives



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|------------------------------------|
| (a) An optically active compound |
| (b) An optically inactive compound |
| (c) A racemic mixture |
| (d) A diastereomeric mixture |

93. Meso-tartaric acid is

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|------------------------|
| (a) Optically inactive |
|------------------------|



97. The number of possible structural isomers for a compound with the molecular formula C_7H_{16} is

- (a) 8
- (b) 9
- (c) 10
- (d) 12

98. Which of the following molecule contains asymmetric carbon atom

- (a) $CH_3CHClCOOH$
- (b) CH_3CH_2COOH
- (c) $ClCH_2CH_2COOH$
- (d) $Cl_2CHCOOH$

99. A similarity between optical and geometrical isomerism is that

- (a) Each forms equal number of isomers for a given compound
- (b) If in a compound one is present then so is the other
- (c) Both are included in stereoisomerism
- (d) They have no similarity

100. If the light waves pass through a Nicol prism then all the oscillations occur only in one plane, such beam of light is called as

- (a) Non-polarised light
- (b) Plane polarised light
- (c) Polarised light
- (d) Optical light

