kd education academy (9582701166)

Time : 5 Hour | STD 11 Science chemistry | Total Marks : 800

kd 700+ neet target ch-8 organic chemistry isomerism (part-2)

*** Chemistry** **[800]**

1. The compound which shows metamerism is :

   (A) C_5H_{12} (B) C_3H_8O (C) C_3H_6O (D) $C_4H_{10}O$

2. The correct statement regarding ethane conformation is :

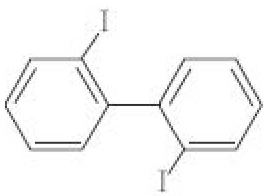
   (A) Rotation around carbon-carbon bond in ethane molecule is not possible, because ethane molecule contains a pi (π) bond between the carbon and carbon and ethane has very low melting point.

   (B) Rotation around carbon-carbon bond in ethane molecule is not possible, because ethane molecule contains both sigma (σ) bond, and pi (π) bond between the carbon and carbon.

   (C) Rotation around carbon-carbon bond in ethane molecule is possible because of cylindrical symmetry of sigma (σ) bond between carbon-carbon atoms

   (D) Rotation around carbon-carbon bond in ethane molecule is not possible, because ethane molecule contains both sigma (σ) bond and pi (π) bond between the carbon and carbon and ethane has very high boiling point.

3. Which of the following biphenyls is optically active?

   (A)


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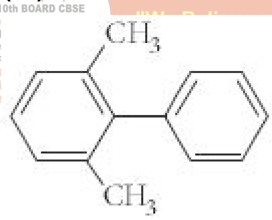

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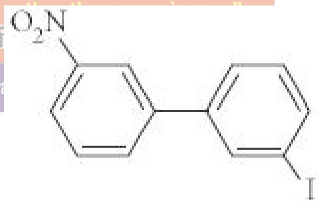

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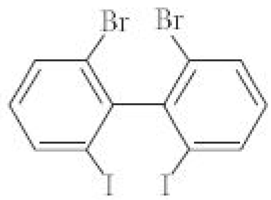


4. Two possible stereo-structures of $CH_3CHOHCOOH$, which are optically active, are called

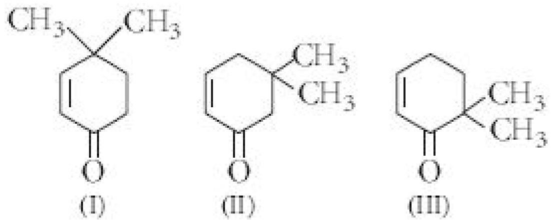
   (A) atropisomers (B) enantiomers (C) mesomers (D) diastereomers

5. The number of structural isomers possible from the molecular formula C_3H_9N is

   (A) 5 (B) 2 (C) 3 (D) 4

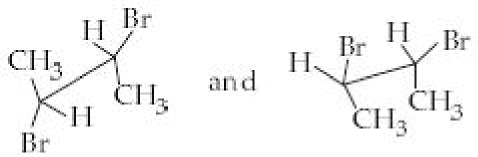
6. Which of the given compounds can exhibit tautomerism ?

Given :



(A) II and III (B) I and II (C) I, II and III (D) I and III

7. Given : I and II are



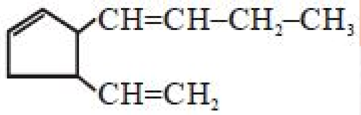
(A) identical

(B) a pair of conformers

(C) a pair of geometrical isomers

(D) a pair of optical isomers

8. Stereoisomer possible for following compound



(A) 8 (B) 16 (C) 32 (D) 64

9. Compound which can show stereoisomerism

(A) $2-$ Chloro propane

(B) $2-$ Chloro $-3-$ methyl but $-2-$ ene

(C) $3-$ Ethyl pent $-2-$ ene

(D) $1-$ Chloro but $-1-$ ene

10. How many chiral isomers can be drawn from $2-$bromo, $3-$chloro butane

(A) 2 (B) 3 (C) 4 (D) 5

11. Which of the following will be chiral

(A) CH_3CHCl_2 (B) $CH_3CHBrCl$ (C) CD_2Cl_2 (D) CH_2ClBr

12. Which of the following is most likely to show optical isomerism

(A) $HC \equiv C - \underset{Cl}{\overset{H}{C}} - C \equiv CH$

(B) $HC \equiv C - \underset{Cl}{\overset{H}{C}} - CH_3$

(C) $HC \equiv C - \overset{H}{\underset{Cl}{\overset{|}{\underset{|}{C}}}} - H$

(D) $HC \equiv C - \overset{Cl}{\overset{|}{C}} = CH_2$

13. A compound whose molecules are superimposable on their mirror images even through they contain an asymmetric carbon atom is called

(A) A meso compound (B) An erythro isomer

(C) A threo isomer (D) a glycol

14. Optically active compound is

(A) $3-$chloropentane (B) $2-$chlorobutane (C) $2-$chloropropane (D) None of these

15. Which of the following compounds is optically active

(A) $(CH_3)_2CHCH_2OH$ (B) CH_3CH_2OH

(C) CCl_2F_2 (D) $CH_3CHOHC_2H_5$

16. What is the possible number of optical isomers for a compound containing $2-$dissimilar asymmetric carbon atom

(A) 2 (B) 4 (C) 6 (D) 8

17. Which of the following hydride is capable of showing conformations

(A) $NH_2 - NH_2$ (B) B_2H_6 (C) CH_4 (D) None of these

18. Disymmetric object is one which is

(A) Superimposable on its mirror image

(B) Non-superimposible on its mirror image

(C) Optically inactive

(D) Achiral

19. Which compound is chiral

(A) butane

(B) $1-$chloro$-2-$methyl butane

(C) $2-$methyl butane

(D) $2-$methyl propane

20. 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

21. Which of the following molecule contains asymmetric carbon atom

(A) $CH_3CHClCOOH$ (B) CH_3CH_2COOH

(C) $ClCH_2CH_2COOH$ (D) $Cl_2CHCOOH$

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

(A) 3 (B) 5 (C) 7 (D) 9

23. Meso-tartaric acid is

(A) Optically inactive

(B) Optically active because of molecular symmetry

(C) Optically inactive due to external compensation

(D) Optically active because of asymmetric carbon atom

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

(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

25. An organic compound $^1CH_3-^2CH_2-^3CH_2-^4CH_2-^5CH_2-^6CH_2-^7CH_3$
To make it chiral compound the attack should be on which carbon atom

(A) 1 (B) 3 (C) 4 (D) 7

26. Glucose has optical isomers

(A) 8 (B) 12

(C) 16 (D) Cannot be predicted

27. Which compound is optically active

(A) $4-$chloro, 1 hydroxy butane

(B) 3^o-butyl alcohol

(C) Secondary butyl amine

(D) $n-$butyl alcohol

28. $d-$ tartaric acid and $l-$ tartaric acid are

(A) Enantiomers (B) Tautomers

(C) Diastereoisomers (D) Structural isomers

29. Which of the following is expected to be optically active

(A) $(CH_3)_4C$ (B) $C_2H_5CH(CH_3)C_3H_7$

(C) $(C_2H_5)_2CHCH_3$ (D) $CH_3CH=CHCH_3$

30. Which of the following contains asymmetric centre

(A) $2-$butene (B) $2,2-$dimethylpropane

(C) $2-$hexyne (D) Lactic acid

31. Optically active isomers but not mirror images are called

(A) Enantiomers (B) Mesomers (C) Tautomers (D) Diastereoisomers

32. The maximum number of stereoisomers possible for 2-hydroxy- 2-methyl butanoic acid is

(A) 1 (B) 2 (C) 3 (D) 4

33. Which of the following compounds exhibits optical isomerism

(A) CH_3CH_2COOH (B) $CH_3CHOHCOOH$

(C) $CH_3CH_2CH_2OH$ (D) $CH_3CHOHCH_3$

34. The property by virtue of which a compound can turn the plane polarised light is known as

(A) Photolysis (B) Phosphorescence (C) Optical activity (D) Polarization

35. Rotation of plane polarised light is measured by

(A) Manometer (B) Polarimeter

(C) Viscometer (D) Refractometer

36. Which of the following has chiral structure

(A) $CH_3-\overset{CH_3}{\overset{|}{C}}H-CH_2COOH$

(B) $CH_3-CH=CH-CH_3$

(C) $CH_3-\overset{CH_3}{\overset{|}{C}}H-CH_2OH$

(D) $CH_3-CHOH-CH_2CH_3$

37. Which one of the following compounds shows optical isomerism

(A) $CH_3CHCl-CH_2-CH_3$

(B) $CH_3-CH_2-CHCl-CH_2-CH_3$

(C) $ClCH_2-CH_2-CH_2-CH_3$

(D) $ClCH_2-CH_2-CH_3$

38. Lactic acid shows which type of isomerism

(A) Geometrical isomerism (B) Tautomerism

(C) Optical isomerism (D) Metamerism

39. Which of the following compounds may not exist as enantiomers

(A) $CH_3CH(OH)CO_2H$ (B) $CH_3CH_2CH(CH_3)CH_2OH$

(C) $C_6H_5CH_2CH_3$ (D) $C_6H_5CHClCH_3$

40. Which one of the following shows optical activity

(A) $HO-\overset{H}{\underset{H}{C}}-COOH$

(B) $CH_3-\overset{H}{\underset{Cl}{C}}-COOH$

(C) $CH_3-\overset{CH_3}{\underset{OH}{C}}-COOH$

(D) $CH_3-\overset{CH_3}{\underset{Cl}{C}}-COOH$

41. The total number of geometrical isomers for the compound hexa $-1,3,5-$ triene is

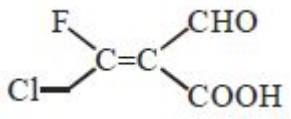
(A) 2 (B) 3 (C) 4 (D) 5

42. Which of the following compounds will show geometrical isomerism

(A) $2-$ Butene (B) Propene

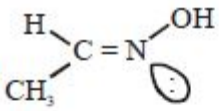
(C) Ethylene (D) $2-$ Methyl $-2-$ butene

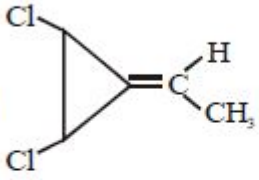
43. Which is correct configuration of the given compound ?

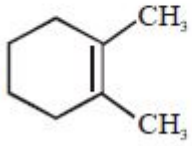


(A) E (B) z (C) Cis (D) Trans

44. Which of the following can show Geometrical isomerism

(a) 

(b) 

(c) 

(d) $CH_2 = CH - CH = CH - Ph$

(A) a, b, d (B) a, c, d (C) a, b, c (D) All of the above

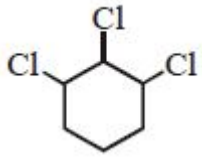
45. Which of the following compounds will show geometrical isomerism ?

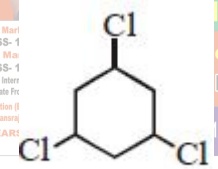
(A) $2-$ pentyne (B) $2-$ pentene

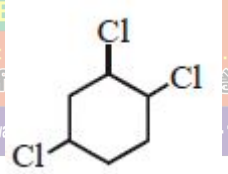
(C) $2-$ methyl propene (D) $2-$ methyl $-2-$ butene

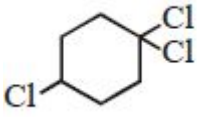
46. Which of the following compounds does not have any geometrical isomer ?

(A) (B) (C) (D)



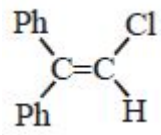




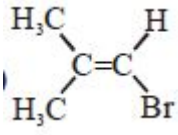


47. Which can show geometrical isomerism ?

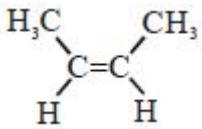
(A)



(B)



(C)



(D) $H_3C - C \equiv C - CH_3$

48. Which of the following would exhibit cis-trans isomerism ?

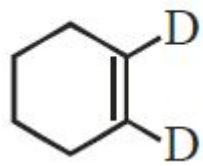
(A) $CH_3CH_2CH = CH_2$ (B) $ClCH = CHCl$

(C) $ClCH = CCl_2$ (D) $CH_2 = CH - COOH$

49. Which of the following can show Geometrical isomerism

(A) $Ph - CH = CH - CH_3$

(B)

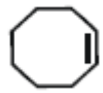


(C)

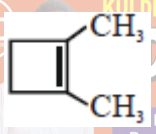
(D) All of above

50. Which of the following compound does not show geometrical isomerism

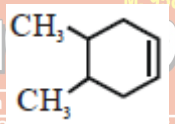
(A)



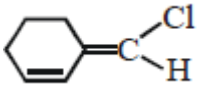
(B)



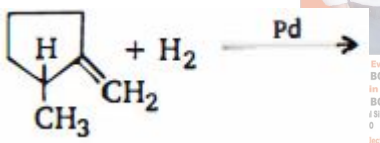
(C)



(D)



51. Product of the above reaction will be



(A) Racemic mixture (B) Diastereomers

(C) Meso (D) Constitutional isomers

52. $CH_3 - CH = CH - CH = CH - CH_3$; total number of geometrical isomer is

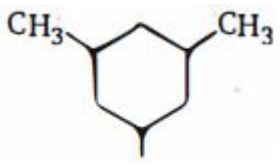
(A) 2 (B) 3 (C) 4 (D) 6

53. $CH_2 = CH - CH = CH - CH = CH_2$

How many geometrical isomers are possible for this compound ?

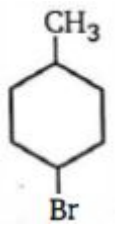
(A) 2 (B) 3 (C) 4 (D) 8

54. How many geometrical isomers are possible for the above compound ?



(A) 0 (B) 2 (C) 3 (D) 4

55. How many geometrical is isomers are possible for the above compound ?

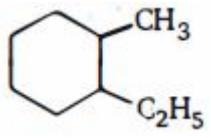


(A) 0 (B) 2 (C) 3 (D) 4

56. How many geometrical isomers are possible for the above compound ?

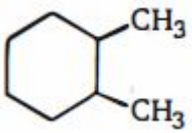
(A) 0 (B) 2 (C) 3 (D) 4

57. How many geometrical isomers are possible for the above compound ?



(A) 0 (B) 2 (C) 3 (D) 4

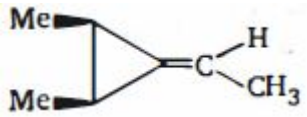
58. How many geometrical isomers are possible for the above compound ?



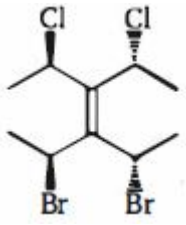
(A) 0 (B) 2 (C) 3 (D) 4

59. Which of the following compound will not show geometrical isomerism across the π -bond?

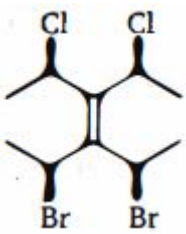
(A)



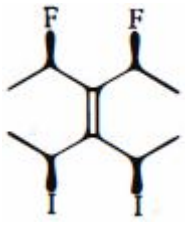
(B)



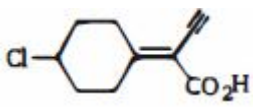
(C)



(D)



60. What are the correct designations for the structure below ?



(A) E,E

(B) Z,E

(C) E, Z

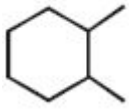
(D) No geometrical isomers are possible

61. Which of the following does not show geometrical isomerism ?

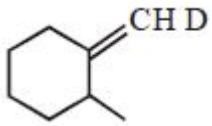
(A) $CH_3 - CH = CH - CH_3$

(B) $HClC = C = CHCl$

(C)

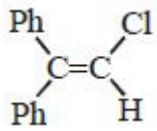


(D)

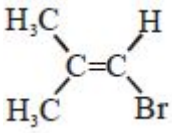


62. Which can show geometrical isomerism ?

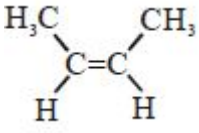
(A)



(B)



(C)



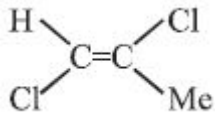
(D) $H_3C - C \equiv C - CH_3$

63. How many geometrical isomers can be written for the compound $CH_3 - CH = CH - CH = CH - CH = CH - Cl$

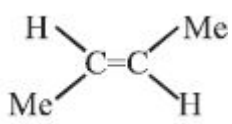
(A) 2 (B) 4 (C) 6 (D) 8

64. Which of the following compound has trans as well as Z configuration around double bond

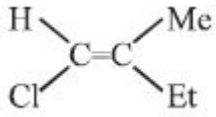
(A)



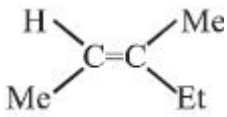
(B)



(C)



(D)



65. Which of the following compounds will show geometrical isomerism

(A) $2-$ Butene

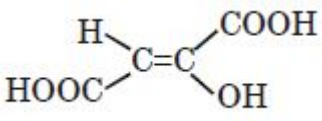
(B) Propene

(C) Ethylene

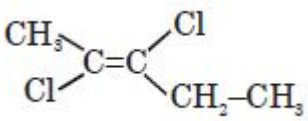
(D) $2-$ Methyl $-2-$ butene

66. Which compound is Z but not cis

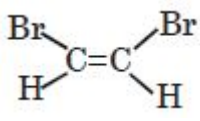
(A)



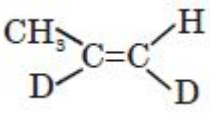
(B)



(C)

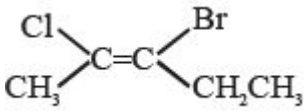


(D)

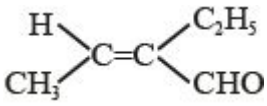


67. Which among the following has E configuration?

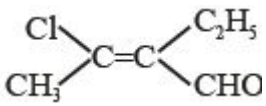
(A)



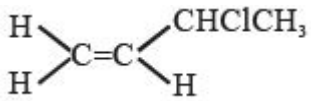
(B)



(C)

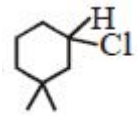


(D)



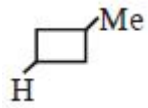
68. Which of the following can show geometrical isomerism :-

(A)



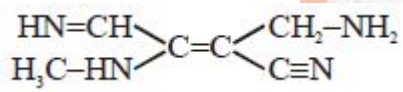
(B)

(C)



(D) All of above

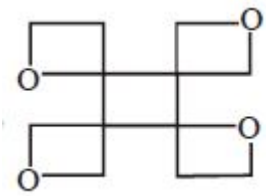
69. Correct configuration of following compound is :-



(A) E (B) Z (C) R (D) S

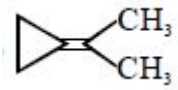
70. Which of the following can not show geometrical isomerism ?

(A)

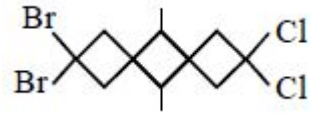


(B) $CH_3 - CH = CH - CH_3$

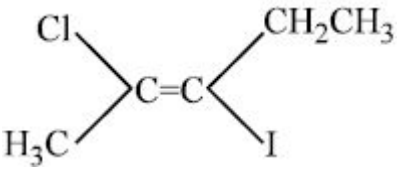
(C)



(D)



71. $IUPAC$ name for the below compound is :



(A) $E-3-$iodo$-4-$chloro$-3-$pentene

(B) $E-2-$chloro$-3-$iodo$-2-$pentene

(C) $Z-2-$chloro$-3-$iodo$-2-$pentene

(D) $Z-3-$iodo$-4-$chloro$-3-$pentene

72. Which of the following will have geometrical isomers

(A) $2-$methylpropene (B) $2-$butene

(C) $1-$butene (D) Propene

73. Which kind of isomerism is possible for $1-$chloro$-2-$nitroethene

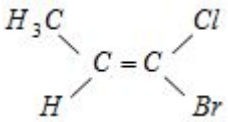
(A) Functional group isomerism (B) Position isomerism

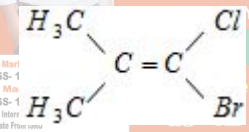
(C) E/Z isomerism (D) Optical isomerism

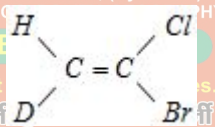
74. Which of the following show geometrical isomerism

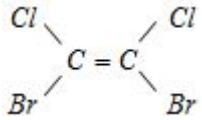
(A) C_2H_5Br (B) $(CH_2)(COOH)_2$ (C) $(CH)_2(COOH)_2$ (D) C_2H_6

75. Which one of the following will not show geometrical isomerism

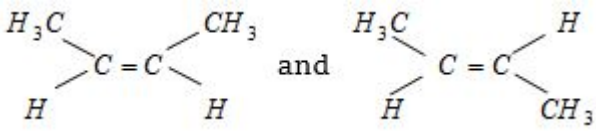
(A) 

(B) 

(C) 

(D) 

76. exhibit which isomerism



(A) Position isomerism (B) Geometrical isomerism

(C) Optical isomerism (D) Functional isomerism

77. Which of the following will show geometrical isomerism

(A) $CH_3CH=CHCH_3$

(B) $(CH_3)_2C=C(CH_3)_2$

(C) $N_2O.FeSO_4$

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

78. Which pair show cis-trans isomerism

(A) Maleic-fumaric acid (B) Lactic-tartaric acid

(C) Malonic-succinic acid (D) Crotonic-acrylic acid

79. Which compound does not show geometrical isomerism

(A) $2-$butene

(B) $2-$pentene

(C) $2,3-$dibromo$-2-$butene

(D) $2-$methyl propene

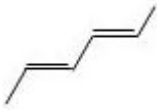
80. The number of geometrical isomers in case of a compound with the structure $CH_3-CH=CH-CH=CH-C_2H_5$ is

(A) 4 (B) 3 (C) 2 (D) 5

81. Number of isomers of molecular formula $C_2H_2Br_2$ are

(A) 1 (B) 2 (C) 3 (D) 0

82. The $IUPAC$ name of compound is



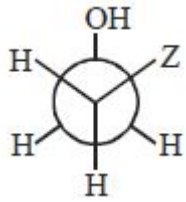
(A) $(2Z,4Z)-2,4-$ hexa di-ene (B) $(2Z,4E)-2,4$ hexa di ene

(C) $(4Z,4Z)-2,4$ hexa di ene (D) $(2E,4E)-2,4$ hexa di ene

83. The newman projection formula of most stable conformation of $3-$ Hydroxypropanal is

(A) Gauche (B) Anti (C) Fully eclipsed (D) Partially eclipsed

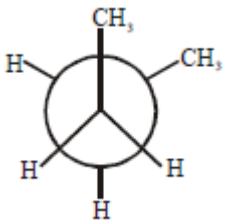
84. Above Gauche form is stable when Z is

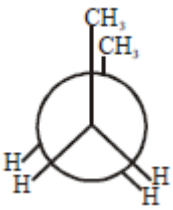


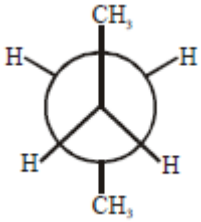
(A) $-F$ (B) $-OH$ (C) $-OCH_3$ (D) All of these

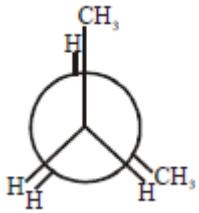
85. Which one is most stable conformers of $n-$ butane?

(A) (B) (C) (D)

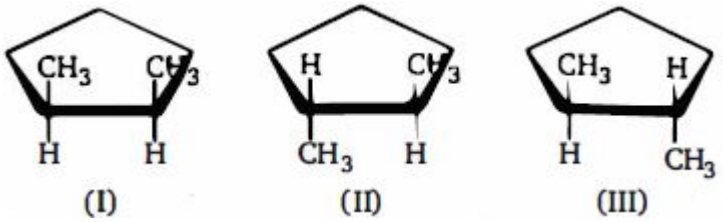








86. Among the structures given , select the enantiomers



(A) I and II (B) I and III (C) II and III (D) I, II and III

87. Which conformation of ethane has the lowest potential energy ?

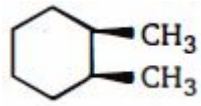
(A) Eclipsed

(B) Skew

(C) Staggered

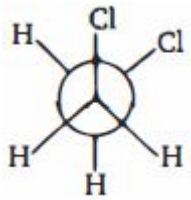
(D) All will have equal potential energy

88. Which of the following describes the best relationship between the methyl groups in the chair conformation of the substance shown below ?



(A) Trans (B) Anti (C) Gauche (D) Eclipsed

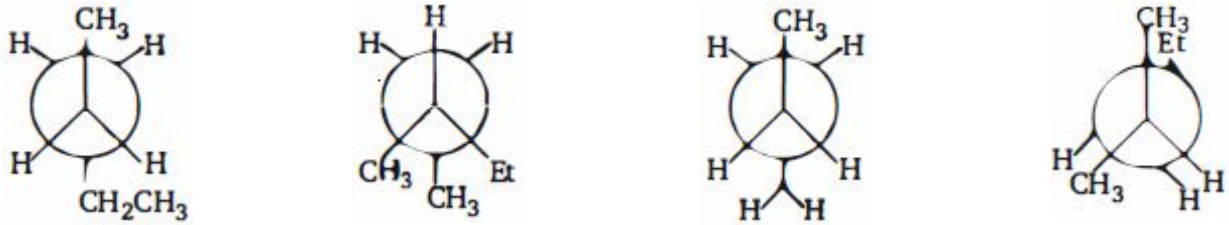
89. For the following Newman projection



(A) (B) (C) (D)

90. Identify conformer of 2 -methyl pentane

(A) (B) (C) (D)

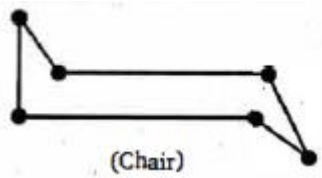


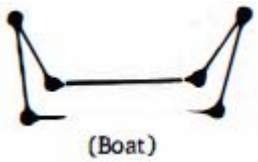
91. The most stable conformation of ethylene glycol is

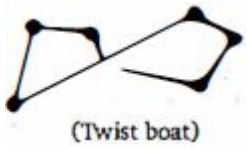
(A) Anti (B) Gauche (C) Partially eclipsed (D) Fully eclipsed

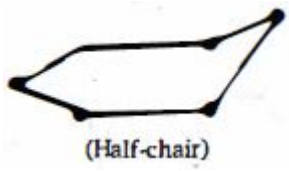
92. Which of the following is the least stable conformer of cyclohexane ?

(A) (B) (C) (D)



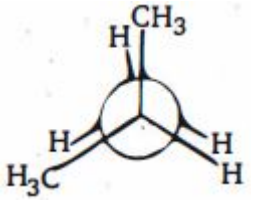


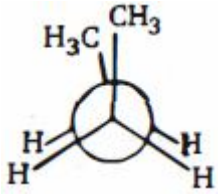


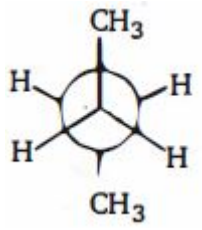


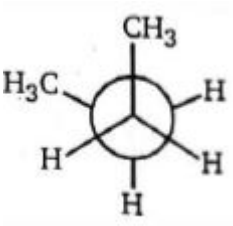
93. Which is the lowest energy conformation of butane ?

(A) (B) (C) (D)









94. Which of the following compounds is most stable ?

(A) (B) (C) (D)

95. Most stable conformation of $n-$ butane is

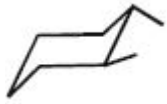
(A) Gauche (B) Anti (C) Partially eclipsed (D) Fully eclipsed

96. Most stable conformation of butane $-1,4-$ dioic acid is

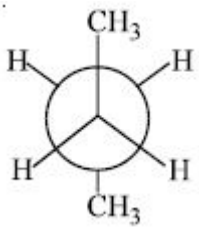
(A) Staggered (B) Gauche (C) Full eclipsed (D) Partial eclipsed

97. Which of the following repersents same configuration as given molecule

(A) (B) (C) (D)

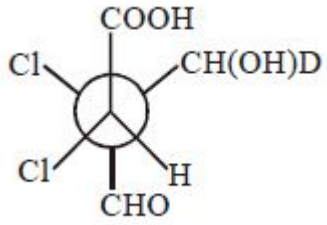


98. One of the configuration of n-butane is drawn in the given figure. Anticlockwise rotation of C_2 around $C_2 - C_3$ bond by 120^o will lead to



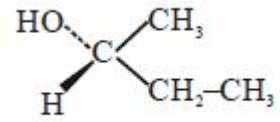
(A) gauche (B) staggerred (C) partially eclipsed (D) fully eclipsed

99. Following compound contains how many chiral centres

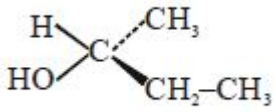


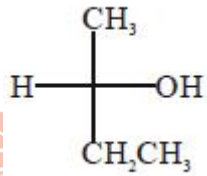
(A) 3 (B) 2 (C) 1 (D) 4

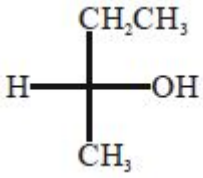
100. The Fischer projection formula of is

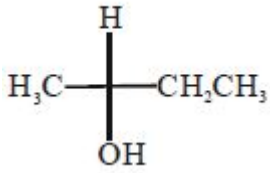


(A) (B) (C) (D)

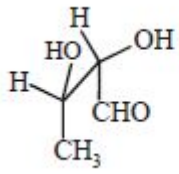


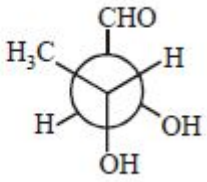






101. What is the relation between given compounds





(A) Enantiomers (B) Diastereomers

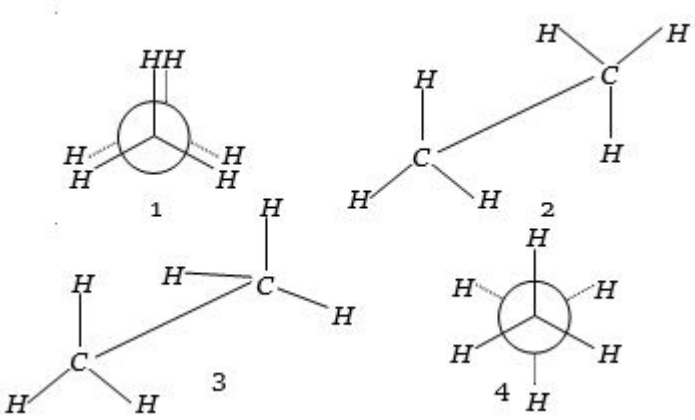
(C) Conformers (D) Identical

102. On another planet jupiter, gauche & anti form of $1,2-$ dichloroethane freezes and single bond rotation stops. Under these conditions these two forms can be considered as :

(A) Enantiomers (B) Diastereomers

(C) Meso compounds (D) Chain isomers

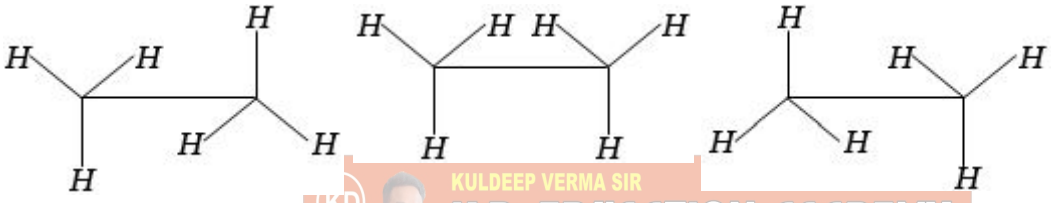
103. Which are the staggered forms of ethane



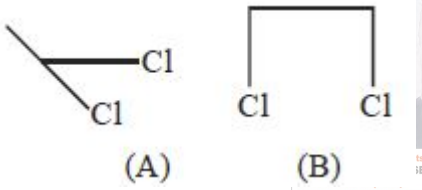
(A) 1 and 4 (B) 3 and 4 (C) 2 and 4 (D) 1 and 3

104. Which one of the following represents eclipsed form of ethane

(A) (B) (C) (D) None of these



105. (A) and (B) are



(A) Chain Isomer (B) Positional Isomer

(C) Metamer (D) Functional Isomer

106. How many strucural isomers of alcohols with the formula C_4H_9OH are possible if all the carbon are in straight chain ?

(A) 4 (B) 5 (C) 2 (D) 3

107. Number of structural isomers of C_3H_6O

(A) 2 (B) 3 (C) 4 (D) 9

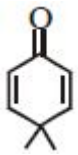
108. No. of structural isomeric alkenes (molecular formula $= C_6H_{12}$) which all give $n-$ hexane on hydrogenation in presence of metal catalyst

(A) 2 (B) 3 (C) 4 (D) 5

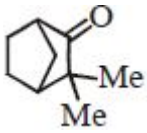
109. Which of the following show tautomerism ?

(A) $(CH_3)_3C - CHO$

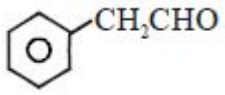
(B)



(C)



(D)



110. Which of the following is isomeric with methyl vinyl ether

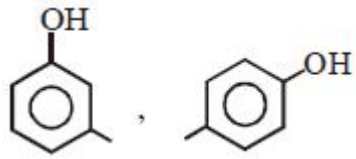
(A) Allyl alcohal (B) Propanal (C) Acetone (D) All of these

111. The number of structural isomers of alkyne possible for the molecular formula C_6H_{10} are

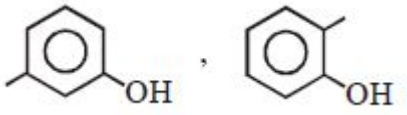
(A) 9 (B) 7 (C) 5 (D) 6

112. Which of the following pairs of compound are not isomers ?

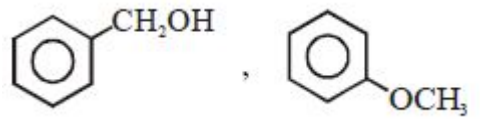
(A)



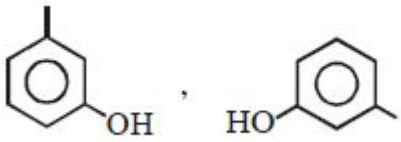
(B)



(C)



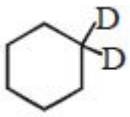
(D)



113. The number of possible structural alkynes with molecular formula, C_5H_8 is

(A) 2 (B) 3 (C) 4 (D) 5

114. How many positional isomer are possible of

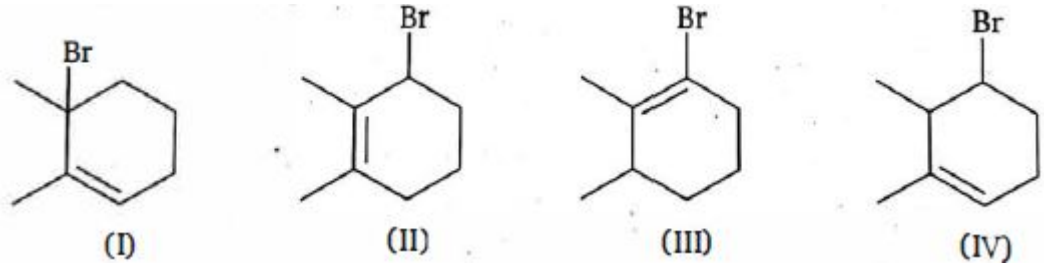


(A) 3 (B) 4 (C) 5 (D) 10

115. Number of chain isomers from C_5H_{12}

(A) 4 (B) 3 (C) 2 (D) 1

116. What is the sum of positions assigned to bromine while numbering the Parent Chain in the below compounds ?



(A) 13 (B) 14 (C) 15 (D) 16

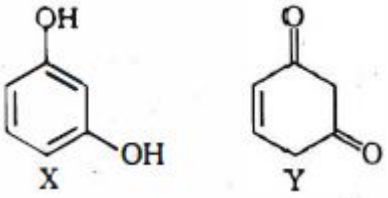
117. The total number of isomeric trimethyl benzene is

(A) 2 (B) 3 (C) 4 (D) 6

118. The number of possible isomers of dichloronitrobenzene is

(A) 3 (B) 4 (C) 6 (D) 8

119. At normal temperature, X and Y

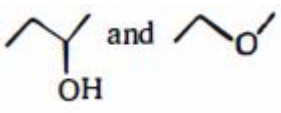


(A) resonance structures (B) tautomers

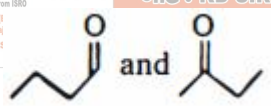
(C) functional isomers (D) positional isomers

120. Which of the following pairs of compounds are functional isomers ?

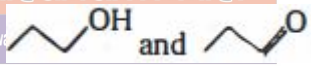
(A)



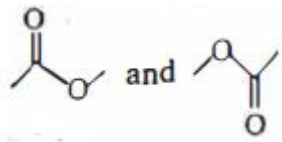
(B)



(C)



(D)

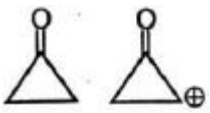


121. The number of all types of isomers of chlorobutane is

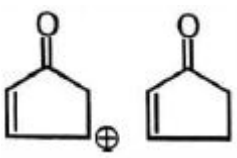
(A) 2 (B) 4 (C) 6 (D) 5

122. Among the given pairs, in which pair second compound has less enol content than first compound?

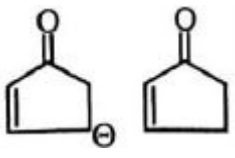
(A)



(B)

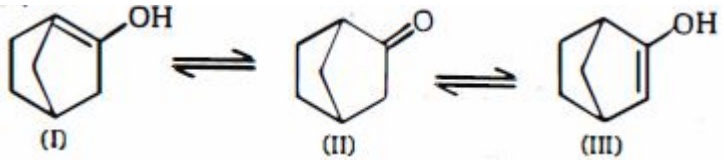


(C)



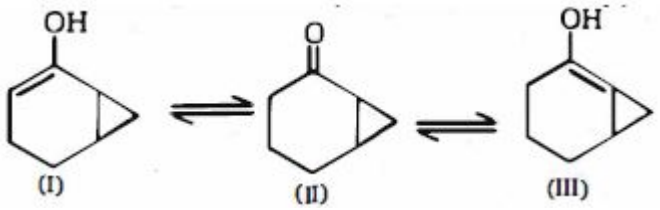
(D) none of these

123. Correct stability order of the given tautomers is



(A) $I > II > III$ (B) $III > II > I$ (C) $II > I > III$ (D) $II > III > I$

124. Correct stability order of the given tautomers is



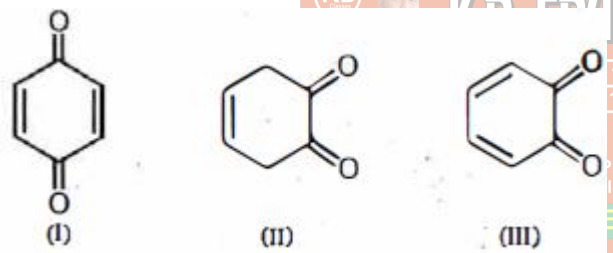
(A) $I > II > III$ (B) $III > II > I$ (C) $II > I > III$ (D) $II > III > I$

125. $\underset{(I)}{CH_3 - CH = O} \rightleftharpoons \underset{(II)}{CH_2 = CH - OH}$

Between the two tautomers which is more stable ?

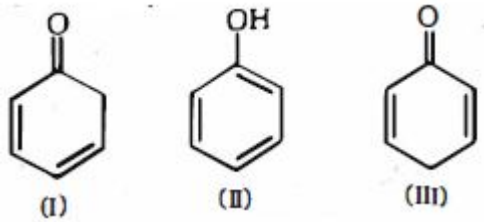
(A) I (B) II (C) $I = II$ (D) none of these

126. Among the given structure which can exhibit tautomerism ?



(A) I only (B) II only (C) III only (D) none of these

127. The tautorner of II is

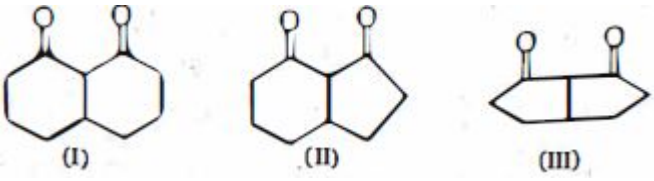


(A) I (B) III (C) both I and III (D) none of these

128. Total number of stereoisomers of the $1,3$ -dichlorocyclohexane is

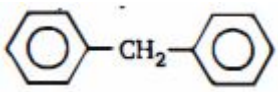
(A) 0 (B) 1 (C) 3 (D) 4

129. The correct decreasing order in the enol 'content of following molecules is



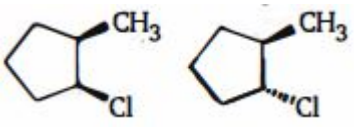
(A) $I > II > III$ (B) $II > I > III$ (C) $III > II > I$ (D) $II > III > I$

130. The molecular formula of diphenylmethane, is $C_{13}H_{12}$
How many structural isomers are possible when one of the hydrogen is replaced by a chlorine atom ?



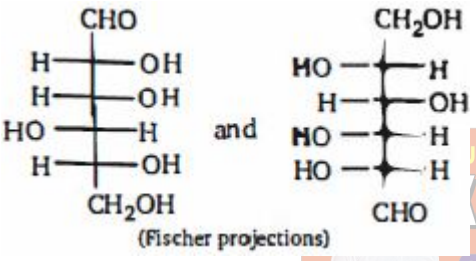
(A) 6 (B) 4 (C) 8 (D) 7

131. The following compounds are identical with respect to



(A) molecular composition (B) boiling point
(C) melting point (D) $IUPAC$ name

132. What is the relationship between the molecules in the following pairs ?



(Fischer projections)

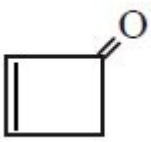
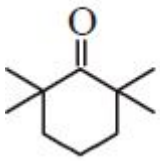
(A) enantiomers (B) diastereomers
(C) identical (D) structural isomers

133. In the molecule $CH_3C \equiv CCH = CH_2$ the maximum number of carbon atoms arranged linearly is
(A) 2 (B) 3 (C) 4 (D) 5

134. No. of structrual isomer of $C_4H_{11}N$
(A) 4 (B) 8 (C) 6 (D) 10

135. Which of the following kinds of isomerism can nitroethane exhibit ?
(A) Metamerism (B) Optical acitivity
(C) Tautomerism (D) Position isomerism

136. Which of the following compound will not show tautomerism?
(A) (B) (C) (D) All of these

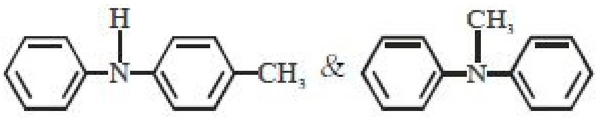




137. How many structure are possible for C_5H_8 with one triple bond ?

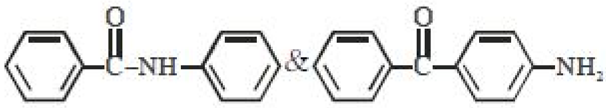
(A) 4 (B) 3 (C) 2 (D) 1

138. Which of the followng pair are metamers

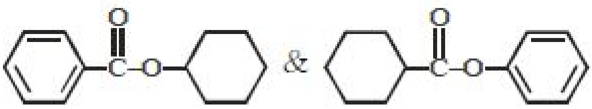
(A)



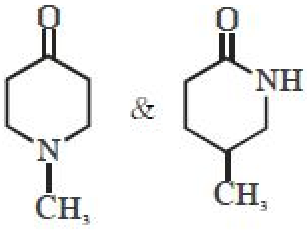
(B)



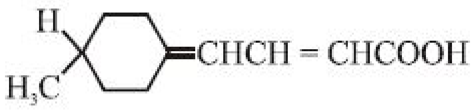
(C)



(D)

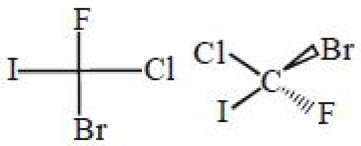


139. How many isomers are possible for the following molecule ?



(A) 1 (B) 2 (C) 3 (D) 4

140. What is relation between following molecules



(A) Enantiomers (B) Diastereomers

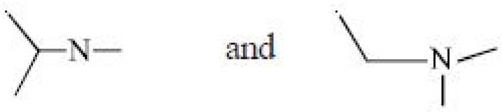
(C) Geometrical isomerism (D) Homomers

141. Esters are fiunctional isomers of:

(A) Hydroxy aldehyde (B) Ketone

(C) Diketone (D) Diols

142. Are which type of isomers

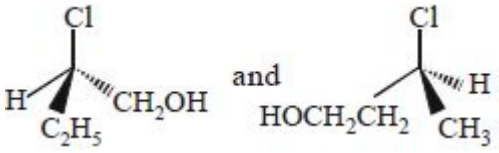


(A) Chain (B) Position (C) Metamerism (D) functional

143. How many secondary amine are possible with molecular formula $C_4H_{11}NH_2$

(A) 4 (B) 3 (C) 2 (D) 1

144. Relation between given pair is :



(A) Enantiomers (B) Diastereomers

(C) Homomers (D) Structural isomers

145. How many primary amines are possible for the formula $C_4H_{11}N$

(A) 1 (B) 2 (C) 3 (D) 4

146. Which of the following compounds shows tautomerism

(A) $HCHO$ (B) CH_3CN (C) CH_3COCH_3 (D) $HCOOH$

147. Which type of isomerism is shown by propanal and propanone

(A) Functional group (B) Metamerism (C) Tautomerism (D) Chain isomerism

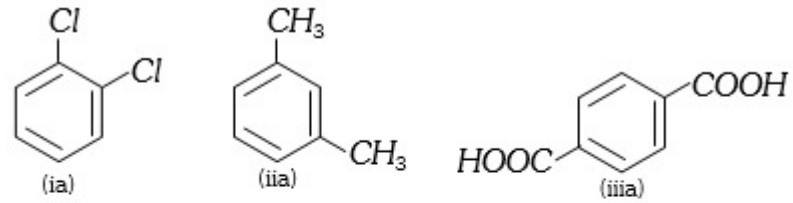
148. $CH_3-O-C_3H_7$ and $C_2H_5-O-C_2H_5$ exhibit which type of isomerism

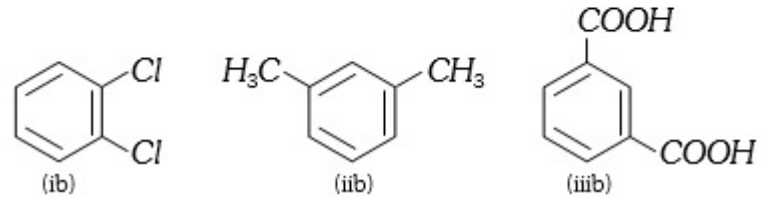
(A) Metamerism (B) Position (C) Chain (D) Functional

149. Which of the following compounds will show metamerism

(A) $CH_3COOC_2H_5$ (B) $C_2H_5-S-C_2H_5$ (C) CH_3-O-CH_3 (D) $CH_3-O-C_2H_5$

150. Examine the following three pairs of possible isomers Now state whether the pairs represent identical compounds or different isomers





(A) All three pairs represent different compounds

(B) (ia) and (ib) are identical; (iia) and (iib) are identical; and $(iiia)$ and $(iiib)$ are identical

(C) (ia) and (ib) are isomers; (iia) and (iib) are identical; and $(iiia)$ and $(iiib)$ are isomers

(D) (ia) and (ib) are identical; (iia) and (iib) are identical, and $(iiia)$ and $(iiib)$ are isomers

151. The number of possible isomers for compound $C_2H_3Cl_2Br$ is

(A) 2 (B) 3 (C) 4 (D) 5

152. The number of possible isomers of butene are

(A) 3 (B) 2 (C) 4 (D) 5

153. Nitroethane can exhibit one of the following kind of isomerism

(A) Metamerism (B) Optical activity

(C) Tautomerism (D) Position isomerism

154. Which of the following statement is wrong

(A) Diethyl ketone and methyl propyl ketone are position isomers

(B) $2-$ chloro pentane and $1-$ chloro pentane are position isomers

(C) $n-$butane and $2-$methyl propane are chain isomers

(D) Acetone and propinaldehyde are functional isomers

155. The functional isomer of ethyl alcohol is

(A) CH_3OCH_3 (B) CH_3COCH_3 (C) CH_3COOH (D) CH_3CH_2CHO

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

(A) 2 (B) 4 (C) 3 (D) 1

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

(A) 2 (B) 3 (C) 4 (D) 5

158. Only two isomeric monochloro derivatives are possible for

(A) $2-$methyl propane (B) $n-$pentane

(C) Benzene (D) $2,4-$dimethyl pentane

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

(A) Position (B) Functional

(C) Dextro isomerism (D) Metamerism

160. Functional isomerism is exhibited by the following pair of compounds

(A) Acetone, propionaldehyde

(B) Diethyl ether, methyl propyl ether

(C) Butane, isobutane

(D) $1-$butene, $2-$butene

161. Diethyl ether and methyl $n-$propyl ether are

(A) Position isomers (B) Functional isomers

(C) Metamers (D) Chain isomers

162. The number of possible alcoholic isomers for $C_4H_{10}O$ are

(A) 4 (B) 2 (C) 3 (D) 5

163. An alkane forms isomers if the number at least carbon atom is

(A) 1 (B) 2 (C) 3 (D) 4

164. Total number of isomers of a disubstituted benzene compound is

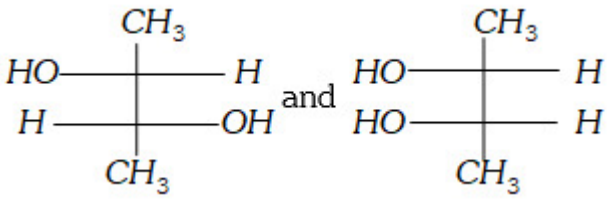
(A) 1 (B) 2 (C) 3 (D) 4

165. The isomer of diethyl ether is

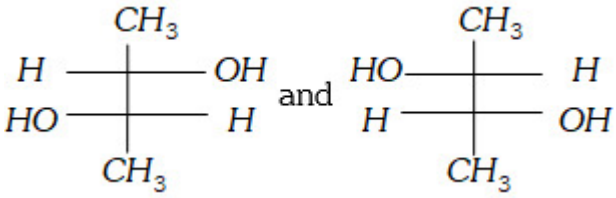
(A) $(CH_3)_2CHOH$ (B) $(CH_3)_3C-OH$ (C) C_3H_7OH (D) $(C_2H_5)_2CHOH$

166. Which of the following pairs of compounds are enantiomers

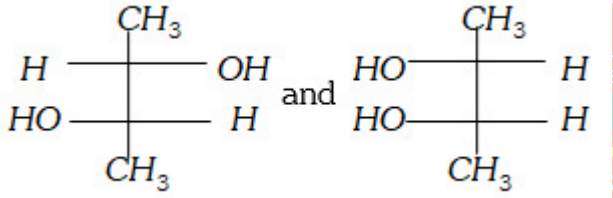
(A)



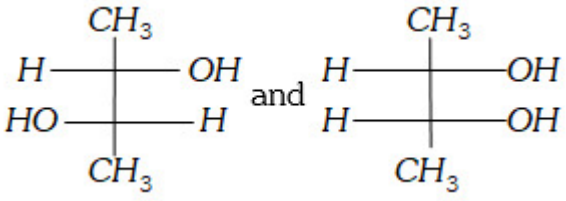
(B)



(C)



(D)



167. Which types of isomerism is shown by $2,3-$ dichlorobutane

(A) Distereo (B) Optical (C) Geometric (D) Structural

168. Which of the following will have a meso isomer also

(A) $2,3-$Dichloropentane

(B) $2,3-$Dichlorobutane

(C) $2-$Chlorobutane

(D) $2-$Hydroxypropanoic acid

169. Racemic mixture is formed by mixing two

(A) Isomeric compounds (B) Chiral compounds

(C) Meso compounds (D) Optical isomers

170. Which of the following does not show geometrical isomerism

(A) $1,2$ dichloro$-1-$pentene

(B) $1,3-$dichloro$-2-$pentene

(C) $1,1-$dichloro$-1-$pentene

(D) $1,4-$dichloro$-2-$pentene

171. A similarity between optical and geometrical isomerism is that

(A) Each forms equal number of isomers for a given compound

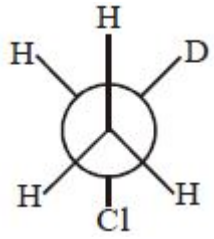
(B) If in a compound one is present then so is the other

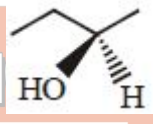
(C) Both are included in stereoisomerism

(D) They have no similarity

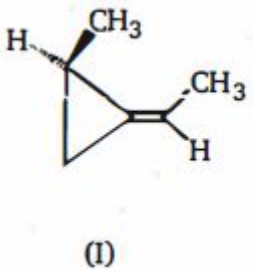
172. Which of the following show optical isomersim

(A) (B) (C) (D) All

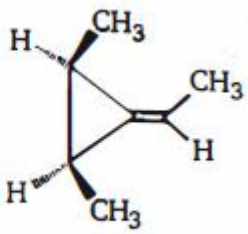




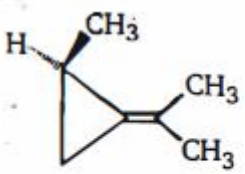
173. Find the sum of all the stereocenters that are present in below compounds



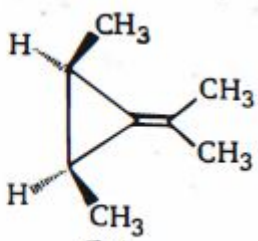
(I)



(II)



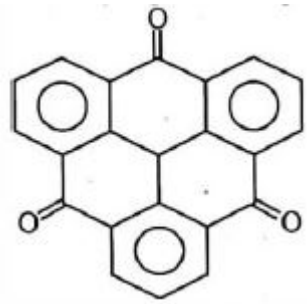
(III)



(IV)

(A) 8 (B) 9 (C) 10 (D) 11

174. Which of the following is correct for the given compound?



(A) It possess centre of symmetry

(B)

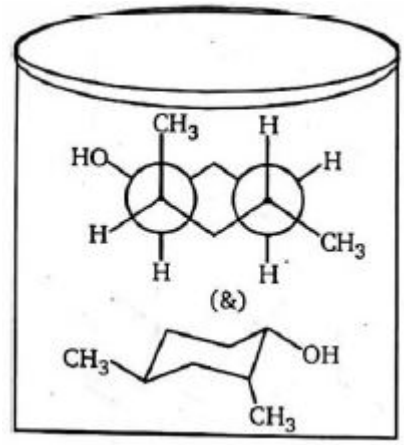
It possess C_4 axis of symmetry

(C) t possess plane of symmetry

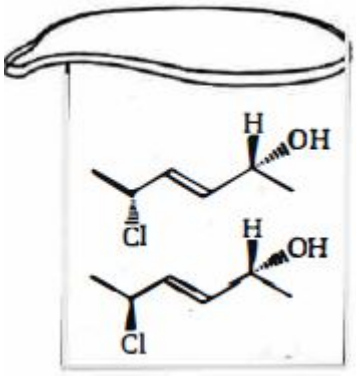
(D) Compound is chiral

175. Which mixture of structure in each beaker would rotate plane polarized light?

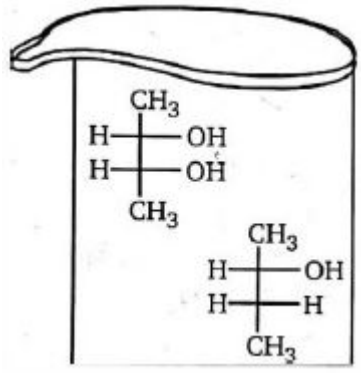
(A)



(B)



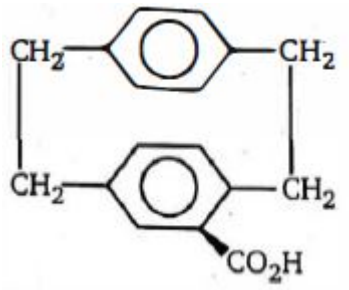
(C)



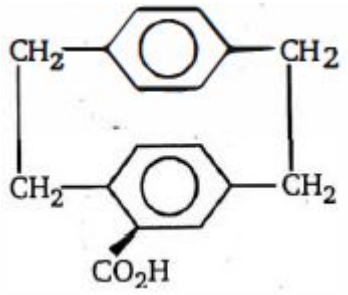
(D) All of these

176. Which of the following compound is achiral ?

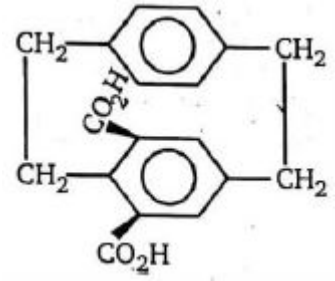
(A)



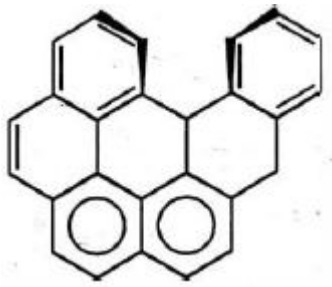
(B)



(C)

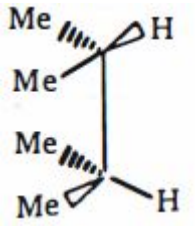


(D)

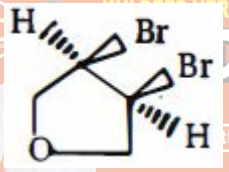


177. Which of the following structure represent meso-compound ?

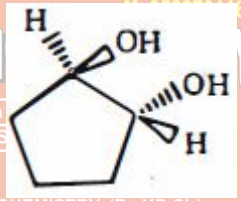
(A)



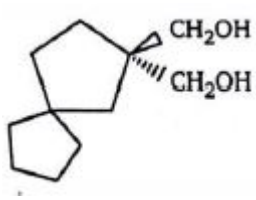
(B)



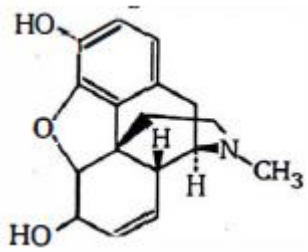
(C)



(D)



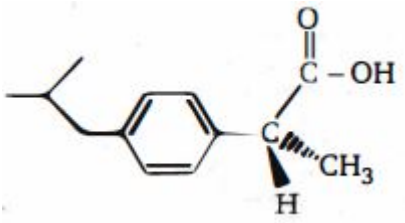
178. How many chiral center (excluding N centres) are there in morphine.?



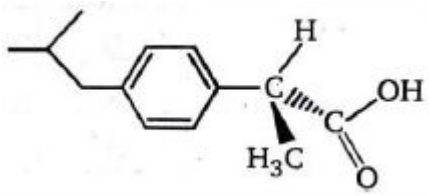
(A) 4 (B) 5 (C) 6 (D) More than 6

179. The S - enantiomer of ibuprofen is responsible for its pain-relieving properties.Which one of the following structures shown below is (S) -ibuprofen ?

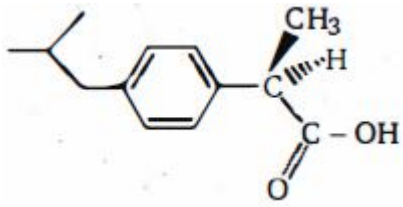
(A)



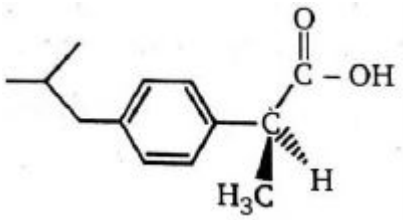
(B)



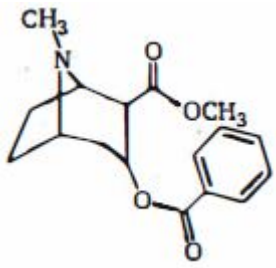
(C)



(D)

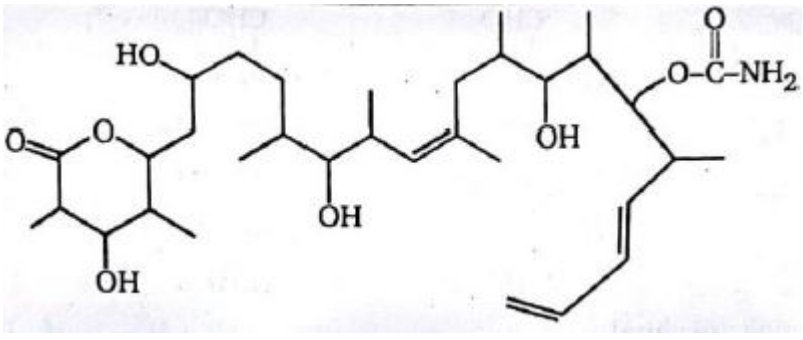


180. The structural formula of cocaine is shown below. How many stereogenic carbon atoms are there in this molecule ?



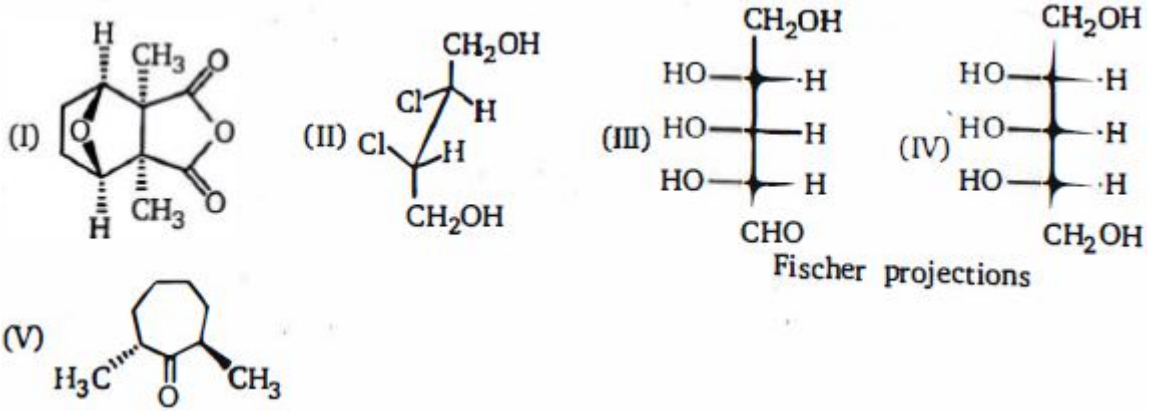
(A) 1 (B) 2 (C) 3 (D) 4

181. What is the maximum number of stereoisomers possible for discodermolide ?



(A) 2^{14} (B) 2^{15} (C) 2^{16} (D) 2^{17}

182. Which of the structures given' below are chiral ?



(A) I, II, III (B) II, III, V (C) II, III (D) I, II

183. Which of the following is a chiral ?

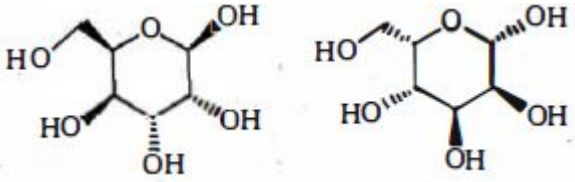
(A)

(B)

(C)

(D) a molecule of 3 -methylheptane

184. The following compounds differ in respect of



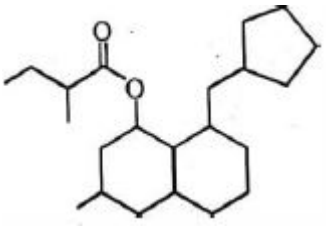
(A) their chemical and physical properties

(B) nothing

(C) the direction in which they rotate plane of polarized light

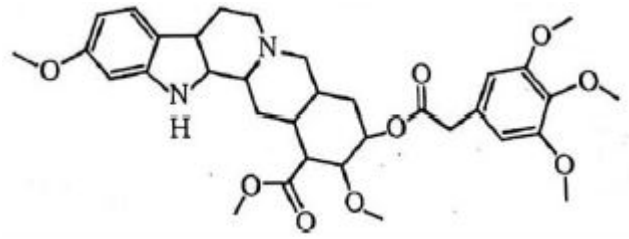
(D) their interactions with molecules

185. How many chiral centers are in the following compound ?



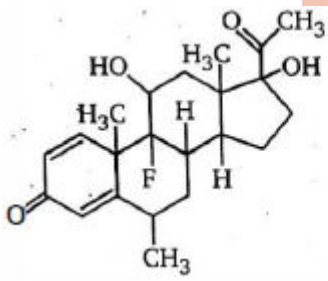
(A) 4 (B) 5 (C) 6 (D) 7

186. How many chiral carbons are there in Reserpine (an antipsychotic drug)?



(A) 9 (B) 8 (C) 7 (D) 6

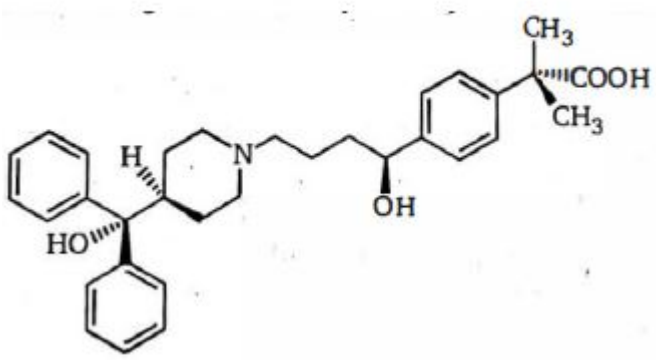
187. The following molecule is fluorometholone a steroidal anti-inflammatory agent. How many stereogenic centers does it contain ?



fluorometholone

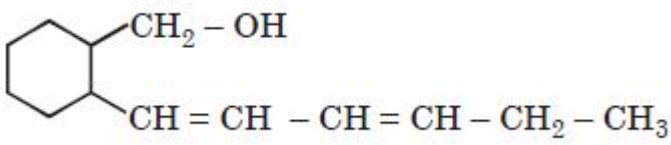
(A) 5 (B) 6 (C) 7 (D) 8

188. Allegra, a common prescription drug with the structure shown below, is given for the treatment of seasonal allergies. How many stereogenic carbon does Allegra possess ?



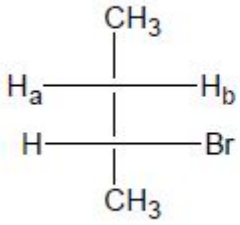
(A) 1 (B) 2 (C) 3 (D) 4

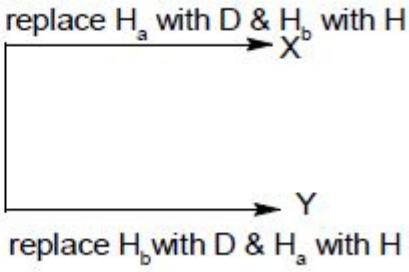
189. Total number of stereo-isomers possible for the following compound is



(A) 8 (B) 16 (C) 32 (D) 64

190. (X) & (Y) are



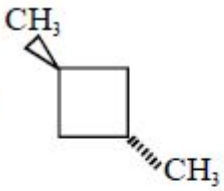


(A) Enantiomers (B) Diastereomers

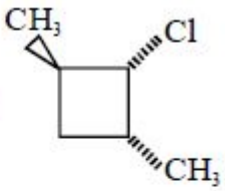
(C) E & Z isomer (D) Constitutional isomer

191. Out of the following which are chiral?

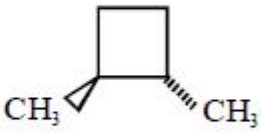
(I)



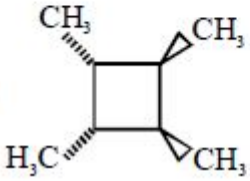
(II)



(III)



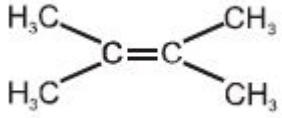
(IV)



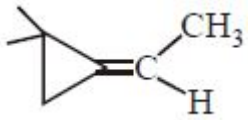
(A) I, II, III (B) I, III, IV (C) II, III (D) II, III, IV

192. Which of the following compound can exist in two different stereoisomeric form

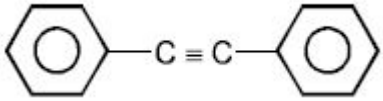
(A)



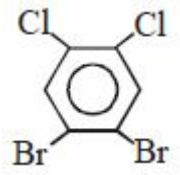
(B)



(C)



(D)

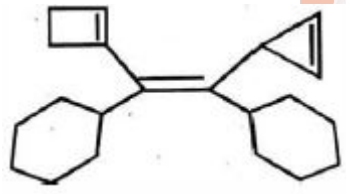


193. The total number of acylic isomers including the stereoisomers with the molecular formula C_4H_7Cl

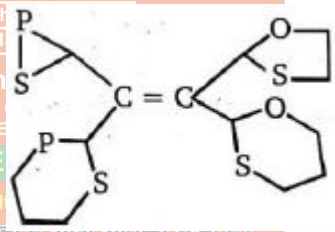
(A) 11 (B) 12 (C) 9 (D) 10

194. Which of following is E isomer ?

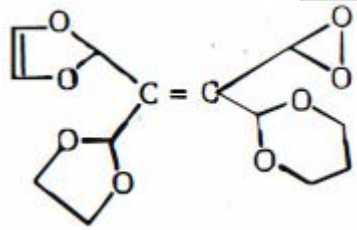
(A)



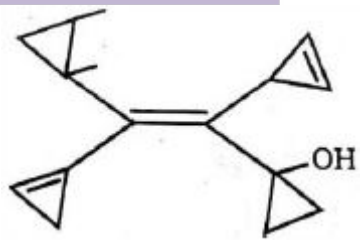
(B)



(C)



(D)



195. On Pluto, where everything is frozen astronauts discovered two forms of butane gauche and anti. Assuming that there are no rotations around single bonds, which statement about the two forms is correct ?

(A) They are enantiomers

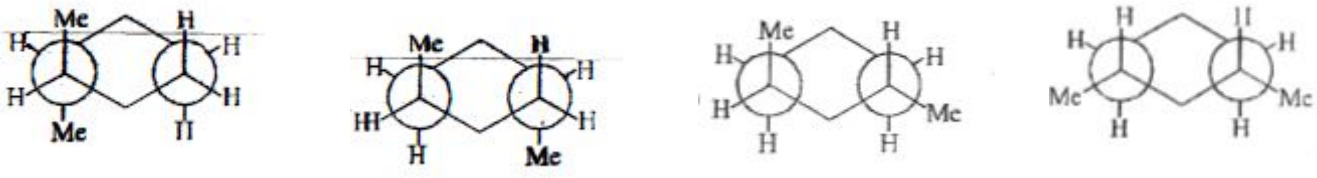
(B) They are diastereoisomers

(C) They are meso compounds

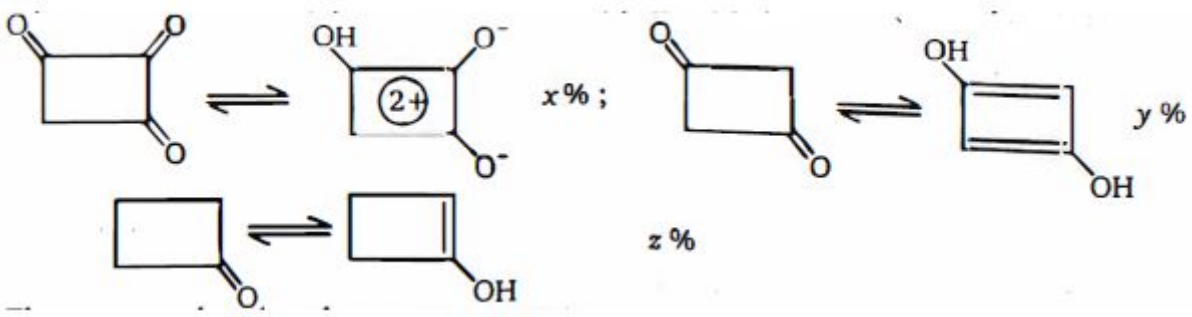
(D) The gauche form has two stereogenic centers, and the anti has only one

196. Which of the following isomeric structure have lowest energy?

(A) (B) (C) (D)



197. The correct order of enol contents x, y, z is

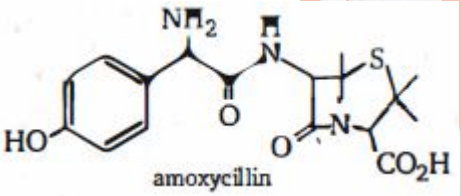


(A) $x > y > z$ (B) $z > y > x$ (C) $y > x > z$ (D) $x > z > y$

198. How many isomers have the name bromomethylcyclopentane ? (ignoring chirality)

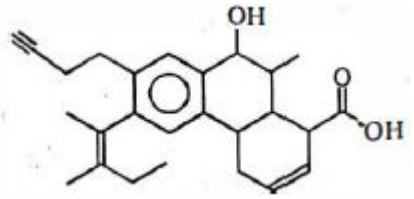
(A) 4 (B) 5 (C) 6 (D) 7

199. How many double bond equivalents does amoxycillin (shown below) possess?



(A) 5 (B) 6 (C) 7 (D) 9

200. How many degrees of unsaturation are there the following compound ?



(A) 6 (B) 7 (C) 10 (D) 11