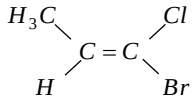
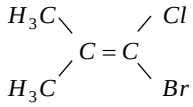
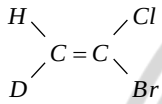
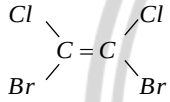
Structural and stereo isomerism

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

(a) 

(b) 

(c) 

(d) 

122. Isomerism shown by

$CH_3-(CH_2)_3-O-CH_3$

$CH_3-CH_2-O-CH_2-CH_2-CH_3$

$CH_3-\underset{\displaystyle CH_3}{\overset{|}{CH}}-O-CH_2-CH_3$ is

(a) Position isomerism

(b) Chain isomerism

(c) Metamerism

(d) Optical isomerism

123. 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

124. Of the following, the compound possessing optical isomerism

(a) CH_3CH_2OH (b) $CH_3CHClBr$

(c) CCl_2BrF (d) CCl_2F_2

125. 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

126. Dimethyl ether and ethyl alcohol are

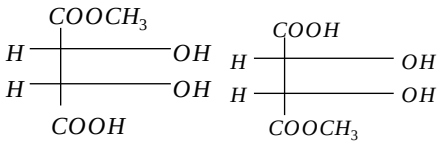
(a) Metamers

(b) Homologues

(c) Functional isomers

(d) Position isomers

127. The correct statement about the compounds *A* and *B* is



(A) (B)

(a) *A* and *B* are identical

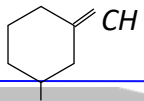
(b) *A* and *B* are diastereomers
(c) *A* and *B* are enantiomers
(d) None of these

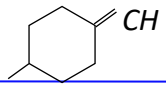
128. Ethyl acetoacetate shows, which type of isomerism
(a) Chain
(b) Optical
(c) Metamerism
(d) Tautomerism

129. Which of the following will have a mesoisomer also
(a) 2, 3-Dichloropentane
(b) 2, 3-Dichlorobutane
(c) 2-Chlorobutane
(d) 2-Hydroxypropanoic acid

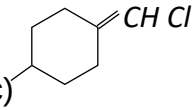
130. For which of the following parameters the structural isomers C_2H_5OH and CH_3OCH_3 would be expected to have the same values ? (Assume ideal behaviour)
(a) Boiling points
(b) Vapour pressure at the same temperature
(c) Heat of vaporization
(d) Gaseous densities at the same temperature and pressure

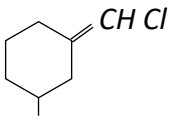
131. The geometrical isomerism is shown by





(a) (b)

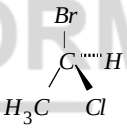
(c) 

(d) 

132. Which of the following compounds will exhibit *cis-trans* isomerism
(a) 2-butene (b) 2-butyne
(c) 2-butanol (d) Butanone
(e) Butanol

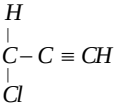
133. Which of the following compounds exhibit stereoisomerism
(a) 2-methyl-butane I
(b) 3-methyl-butanoic acid
(c) 3-methyl-butyne I
(d) 2-methyl butanoic acid

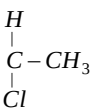
134. The chirality of the compound



(a) *R* (b) *S*
(c) *Z* (d) *E*

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

(a) 

(b) 

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

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

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

(a) Metamerism

(b) Optical activity

(c) Tautomerism

(d) Position isomerism

137. $CH_3CH(OH).COOH$ shows

(a) Geometrical isomerism

(b) Optical isomerism

(c) Both

(d) None

138. Which will have enantiomer

(a) $CH_3CH_2\underset{Cl}{\overset{|}{C}}H - CH_3$

(b) $CH_2CH_2CH_2CH_2Cl$

(c) $CH_3CH_2CH_2CHCl_2$

(d) None

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

(a) 11 (b) 12

(c) 9 (d) 10

140. The number of possible enantiomeric pairs that can be produced during mono-chlorination of 2-methylbutane is

(a) 3 (b) 4

(c) 1 (d) 2