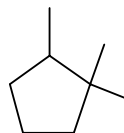


ANSWERS TO ISOMER PROBLEMS

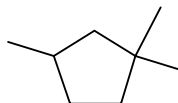
1. Isomers of C_7H_{16} :

(i)	$CH_3CH_2CH_2CH_2CH_2CH_2CH_3$	n-heptane
(ii)	$(CH_3)_2CHCH_2CH_2CH_2CH_3$	2-methylhexane
(iii)	$CH_3CH_2CH(CH_3)CH_2CH_2CH_3$	3-methylhexane
(iv)	$(CH_3CH_2)_2CHCH_2CH_3$	3-ethylpentane
(v)	$(CH_3)_3CCH_2CH_2CH_3$	2,2-dimethylpentane
(vi)	$(CH_3)_2CHCH(CH_3)CH_2CH_3$	2,3-dimethylpentane
(vii)	$(CH_3)_2CHCH_2CH(CH_3)_2$	2,4-dimethylpentane
(viii)	$(CH_3CH_2)_2C(CH_3)_2$	3,3-dimethylpentane
(ix)	$(CH_3)_3CCH(CH_3)_2$	2,2,3-trimethylbutane

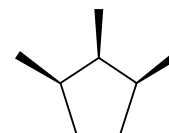
2. Isomers of trimethylcyclopentane:



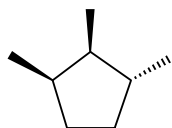
(i) 1,1,2-



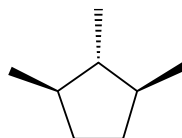
(ii) 1,1,3-



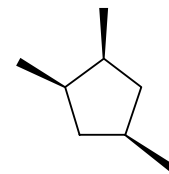
(iii) *cis,cis*-1,2,3-



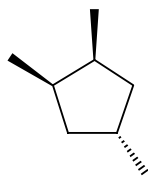
(iv) *cis,trans*-1,2,3-



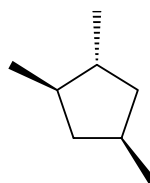
(v) *trans,trans*-1,2,3-



(vi) *cis,cis*-1,2,4-



(vii) *cis,trans*-1,2,4-

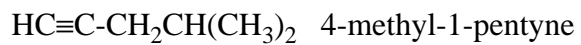
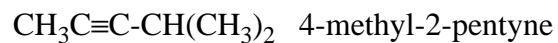
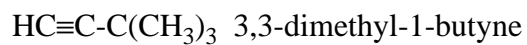
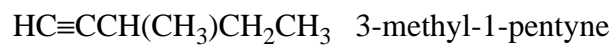
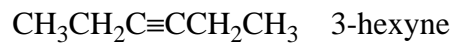
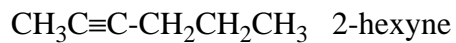
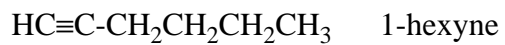


(viii) *trans,trans*-1,2,4-

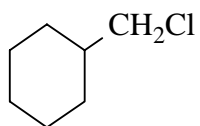
ISOMERS OF ALKENES WITH THE FORMULA C_6H_{12}

- (1) $CH_2=CHCH_2CH_2CH_2CH_3$ 1-hexene
- (2)&(3) $CH_3CH=CHCH_2CH_2CH_3$ *cis* & *trans*-2-hexene
- (4)&(5) $CH_3CH_2CH=CHCH_2CH_3$ *cis* & *trans*-3-hexene
- (6) $CH_2=C(CH_3)CH_2CH_2CH_3$ 2-methyl-1-pentene
- (7) $CH_2=CHCH(CH_3)CH_2CH_3$ 3-methyl-1-pentene
- (8) $CH_2=CHCH_2CH(CH_3)_2$ 4-methyl-1-pentene
- (9) $(CH_3)_2C=CHCH_2CH_3$ 2-methyl-2-pentene
- (10)&(11) $CH_3CH=C(CH_3)CH_2CH_3$ *cis* & *trans*-3-methyl-2-pentene
- (12)&(13) $CH_3CH=CHCH(CH_3)_2$ *cis* & *trans*-4-methyl-2-pentene
- (14) $CH_2=C(CH_2CH_3)_2$ 2-ethyl-1-butene
- (15) $CH_2=C(CH_3)CH(CH_3)_2$ 2,3-dimethyl-1-butene
- (16) $CH_2=CHC(CH_3)_3$ 3,3-dimethyl-1-butene
- (17) $(CH_3)_2C=C(CH_3)_2$ 2,3-dimethyl-2-butene

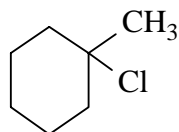
ISOMERS OF ALKYNES WITH THE FORMULA C₆H₁₀



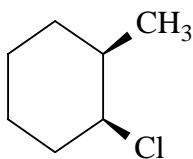
MONOCHLORO ISOMERS (EXCLUDING OPTICAL ISOMERS) PRODUCED FROM THE REACTION BETWEEN METHYLCYCLOHEXANE AND Cl₂ WITH UV LIGHT



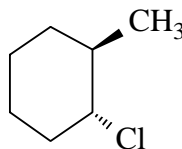
chloromethylcyclohexane



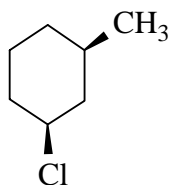
1-chloro-1-methylcyclohexane



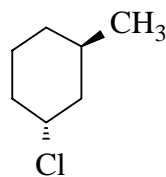
cis-1-chloro-2-methylcyclohexane



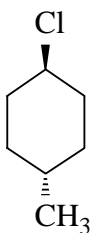
trans-1-chloro-2-methylcyclohexane



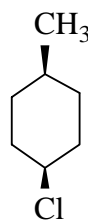
cis-1-chloro-3-methylcyclohexane



trans-1-chloro-3-methylcyclohexane

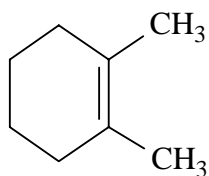


trans-1-chloro-4-methylcyclohexane

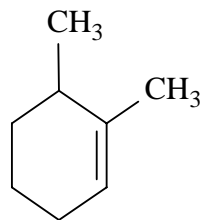


cis-1-chloro-4-methylcyclohexane

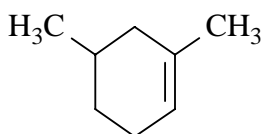
ISOMERS OF DIMETHYLCYCLOHEXENE (EXCLUDING OPTICAL ISOMERS)



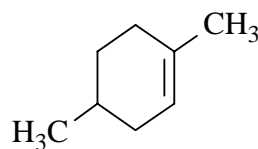
1,2-dimethylcyclohexene



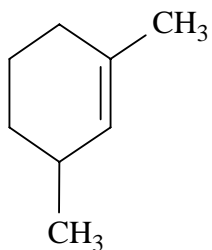
1,6-dimethylcyclohexene



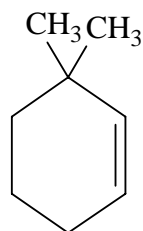
1,5-dimethylcyclohexene



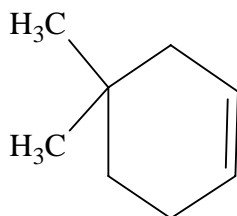
1,4-dimethylcyclohexene



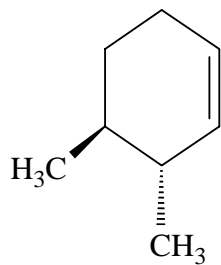
1,3-dimethylcyclohexene



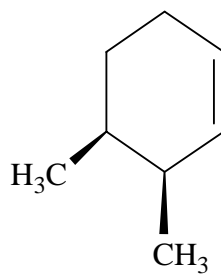
3,3-dimethylcyclohexene



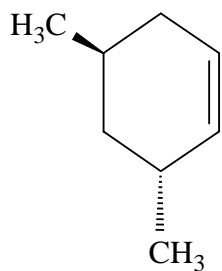
4,4-dimethylcyclohexene



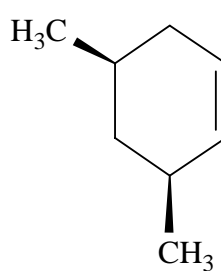
trans-3,4-dimethylcyclohexene



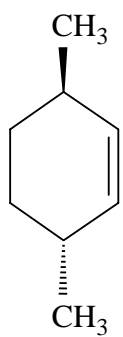
cis-3,4-dimethylcyclohexene



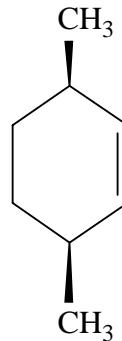
trans-3,5-dimethylcyclohexene



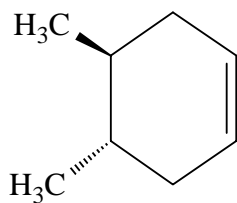
cis-3,5-dimethylcyclohexene



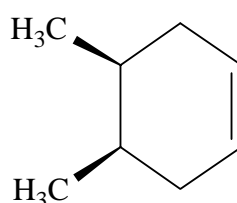
trans-3,6-dimethylcyclohexene



cis-3,6-dimethylcyclohexene



trans-4,5-dimethylcyclohexene



cis-4,5-dimethylcyclohexene