Numerical Value Type	**DTS-11**

126.(2) $Cl-CH_2-\overset{*}{C}H(CH_3)-CH_2-CH_3$, $CH_3-CH(CH_3)-\overset{*}{C}H(Cl)-CH_3$

127.(2) Only Al_4C_3 and Be_2C upon hydrolysis yield methane

$$Al_4C_3 + 12H_2O \longrightarrow 3CH_4 + 4Al(OH)_3$$

$$Be_2C + 4H_2O \longrightarrow CH_4 + 2Be(OH)_2$$

128.(6) $CH_3-CH_2-C\equiv C-CH_3 + HBr \longrightarrow \underset{\text{I}}{CH_3-CH_2-C(Br)=CH-CH_3} + \underset{\text{II}}{CH_3-CH_2-CH=C(Br)-CH_3}$

I and II are structural isomers. Both of these show geometrical isomerism, thus in all four configurational isomers are possible.

$\Rightarrow$ $x = 2$ and $y = 4$ $\Rightarrow$ $x + y = 6$

129.(7) $CH_3-\overset{*}{C}H(CH_2-CH_3)-CH_2-CH_2-CH_3$ (or) $CH_3-\overset{*}{C}H(CH_2-CH_3)-CH(CH_3)_2$

130.(5) **(i)** $CH_3-CH_2-CH_2-CH_2-CH_2-CH_3$ n-Hexane

(ii) $CH_3-CH(CH_3)-CH_2-CH_2-CH_3$ 2-Methylpentane

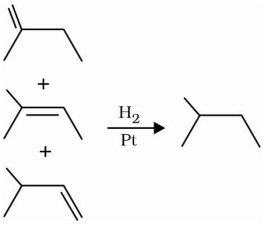
(iii) $CH_3-CH_2-CH(CH_3)-CH_2-CH_3$ 3-Methylpentane

(iv) $CH_3-CH(CH_3)-CH(CH_3)-CH_3$ 2, 3-Dimethylbutane

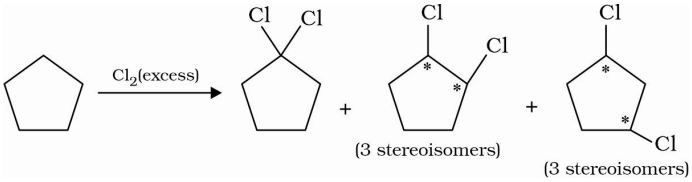
(v) $CH_3-C(CH_3)_2-CH_2-CH_3$ 2, 2-Dimethylbutane

Total chain isomers = 5

131.(3)



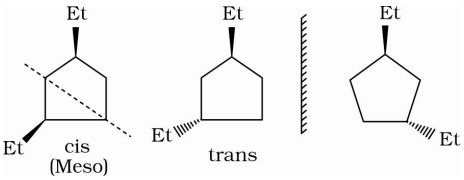
132.(7)



Total 7 dichloro products are possible.

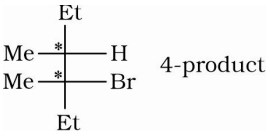
133.(2) Two products will be obtained by addition reaction above and below the plane of ring. It is the example of syn hydroxylation.

134.(3)

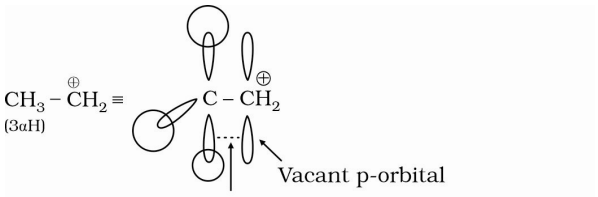


Total three stereoisomers

135.(4)



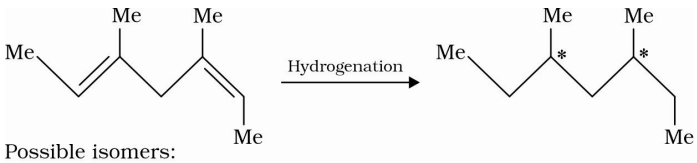
136.(3)



Partial overlapping σ-π conjugation
(Hyperconjugation) or σ-bond resonance

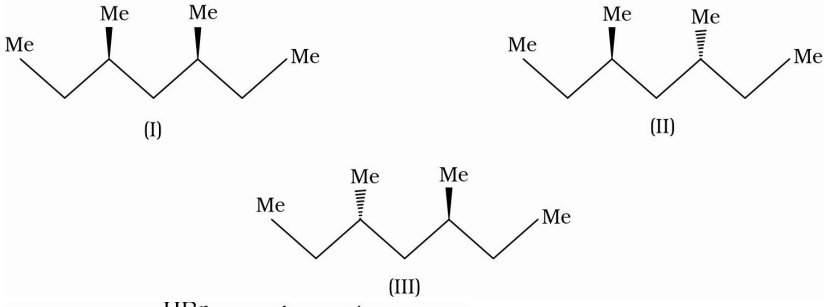
Here 3 carbon hydrogen bond orbital are available for overlap with adjacent vacant p-orbital

137.(3)



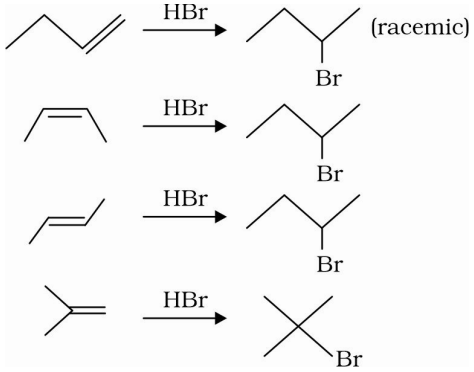
where * = chiral centre

Possible isomers:



Total isomers = 3

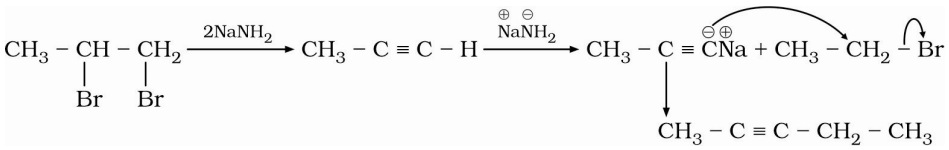
138.(7)



x = 4, y = 3 ∴ x + y = 7

139.(9) Degree of unsaturation (or) Double bond equivalent $= (C+1)-\left(\frac{H+X-N}{2}\right)$ ⇒ D.B.E. = 7

140.(3)



Total 3 moles of $NaNH_2$ are required.