Aromaticity and Bayer Strain Angle Theory

Course on General Organic Chemistry for Class XI

SURENDRA K MISHRA • Lesson 15 • Aug 31, 2021

(110) I.HD = Total No. of Ring + Total No. of π Bond

(114) (C) Numbering alphabet. 1, 3, 5 E

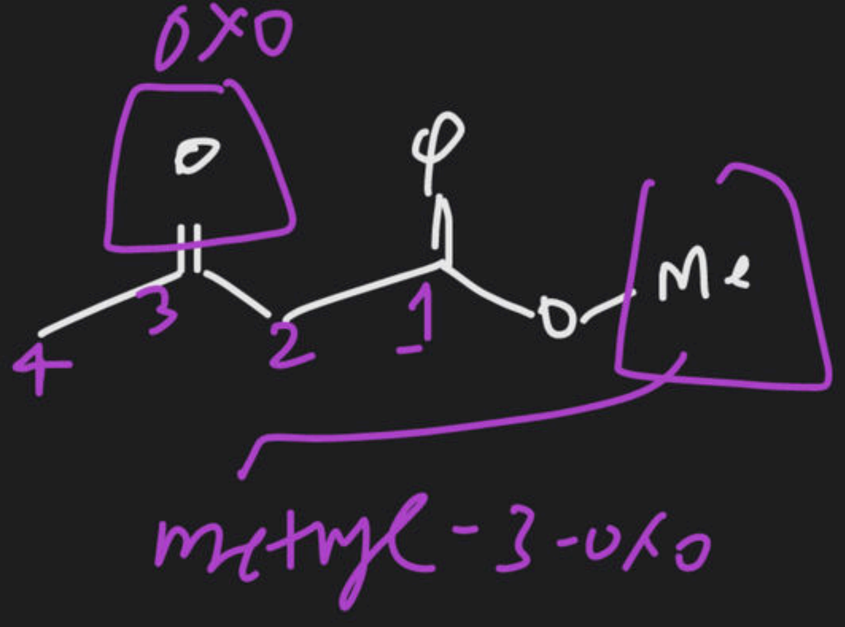
(117 $CH_3-CH_2-CH=CH-CH_2-CH_3$ [ ]

C_6H_{12} C_6H_{12}

(110)

(120)

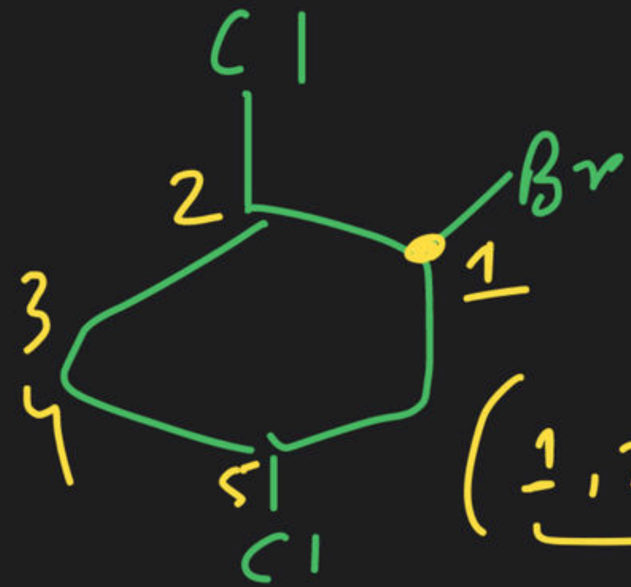
(126)



(129) (B) $C_nH_{2n}O_3$

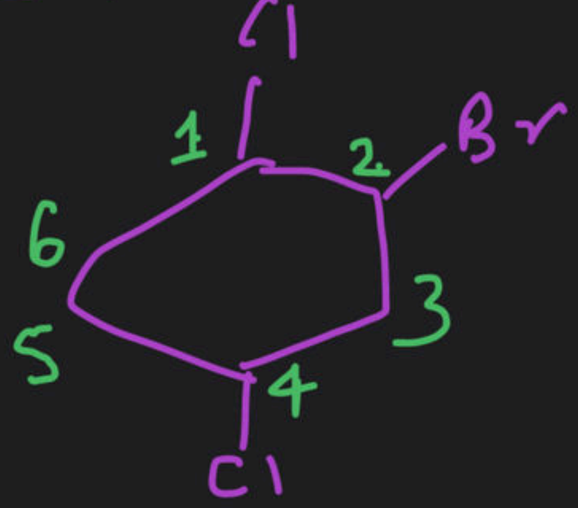
DBE = 1

(130) Hydrocarbons



(1,2,5)

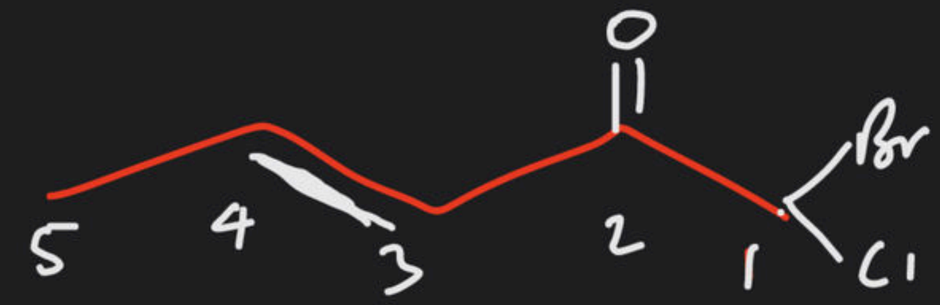
(131)

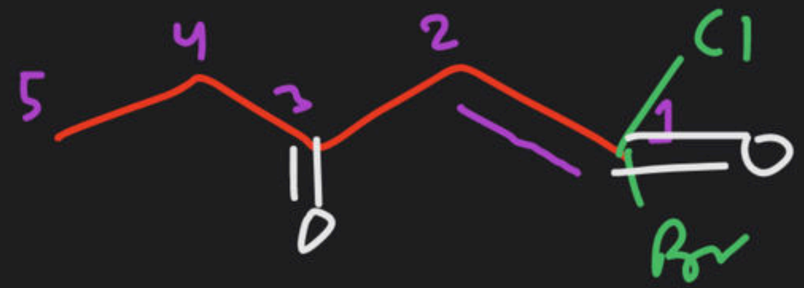


(1,2,4)

(136) $(P_1 + R_2 - P_3 + P_4)_{\text{Minimum.}}$

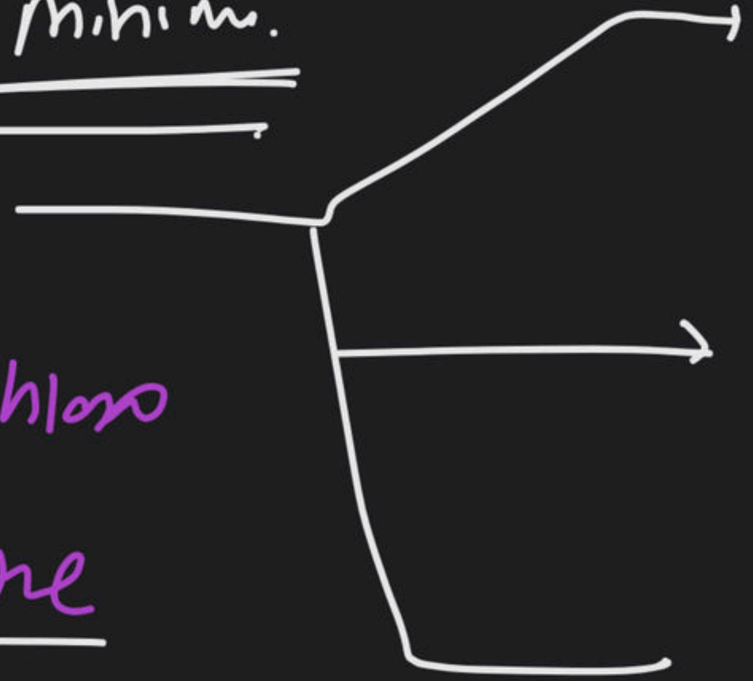
P1- Bromo - P3 - chloro - pent - P3 - en - P4 - one

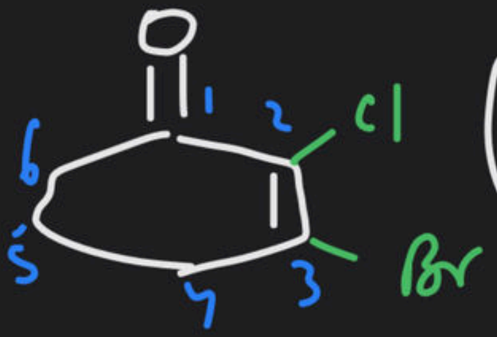




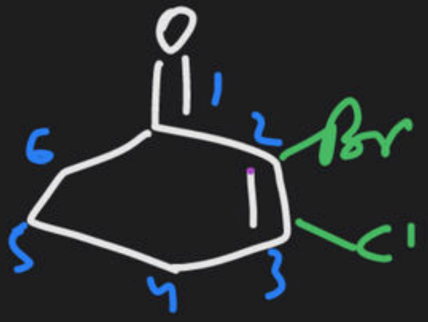
P_1	R_2	P_3	P_4
1	1	3	2
1	1	1	3

(138) $(P_1 + P_2 + P_3)_{\text{Minimum}} = 7$

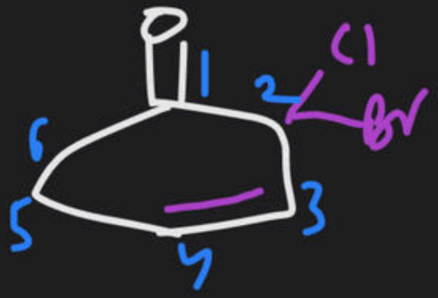




$P_1 = 3, P_2 = 2$
$P_3 = 2$



$P_1 = 2, P_2 = 3$
$P_3 = 2$



$P_1 = 2, P_2 = 2$
$P_3 = 3$

P_1-Bromo-P_2-chloro

Cyclohex-P_3-enone

(140)

A ✓
B ✗ (4 ✗ C)
C ✓
D) X (3 ✗ 4)
E) ✓

X	
f	3 ✗
G	✓
n	✗

(144)

(P) $-COOH$

(Q) $-CH_3$

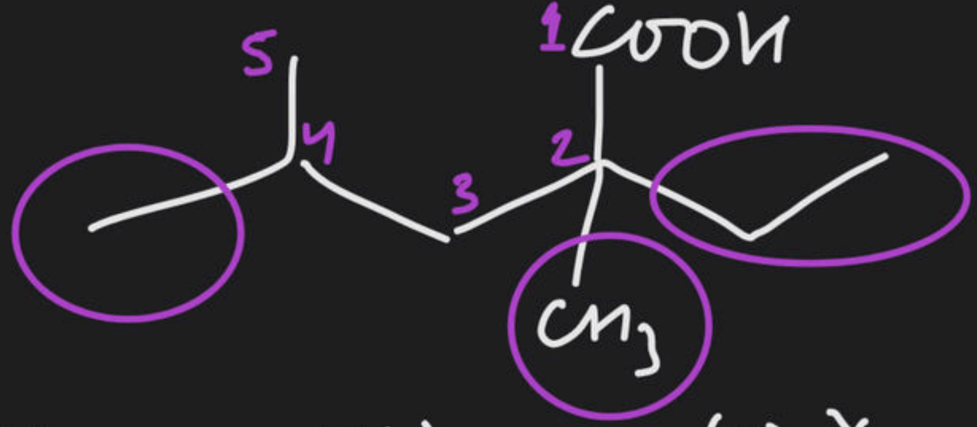
(R) $-CH_2-CH_3$

(m)

(i) P(1) Q(1)

(ii)

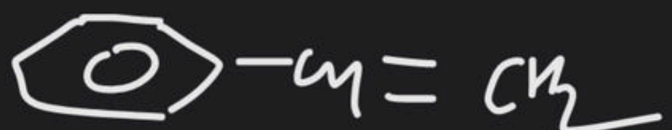
(iii)

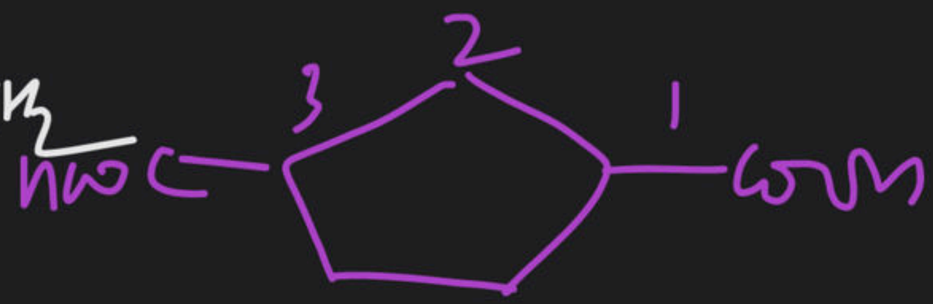


Correct

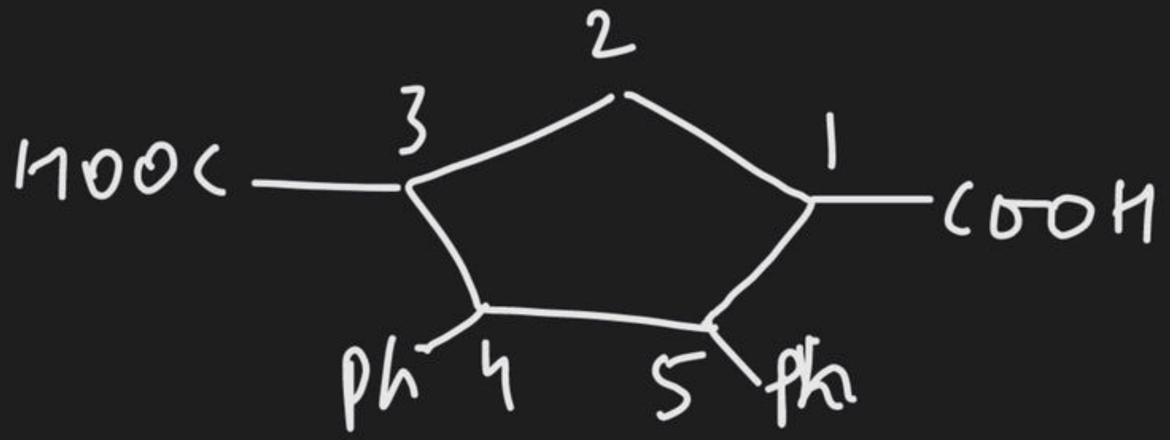
(145) (i) X (iii) ✓ (v) X (vii) ✓

(ii) ✓ (iv) X (vi) X (viii) ✓

(148) Styrene 



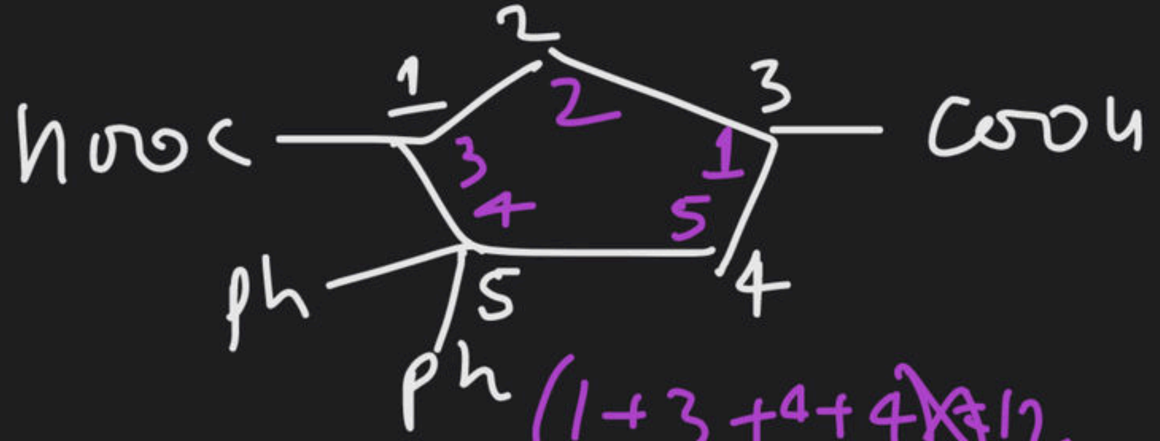
(149)



Z & W = 1, 3

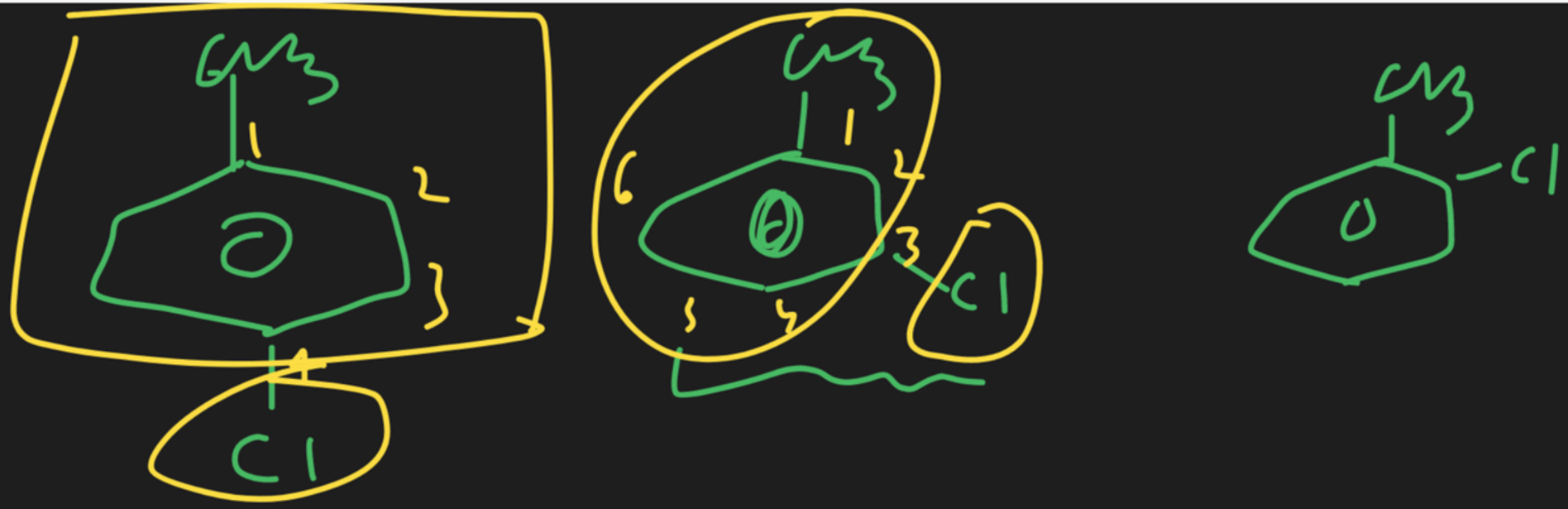
x, y = 4, 5

13



$(1+3+4+4) = 12$

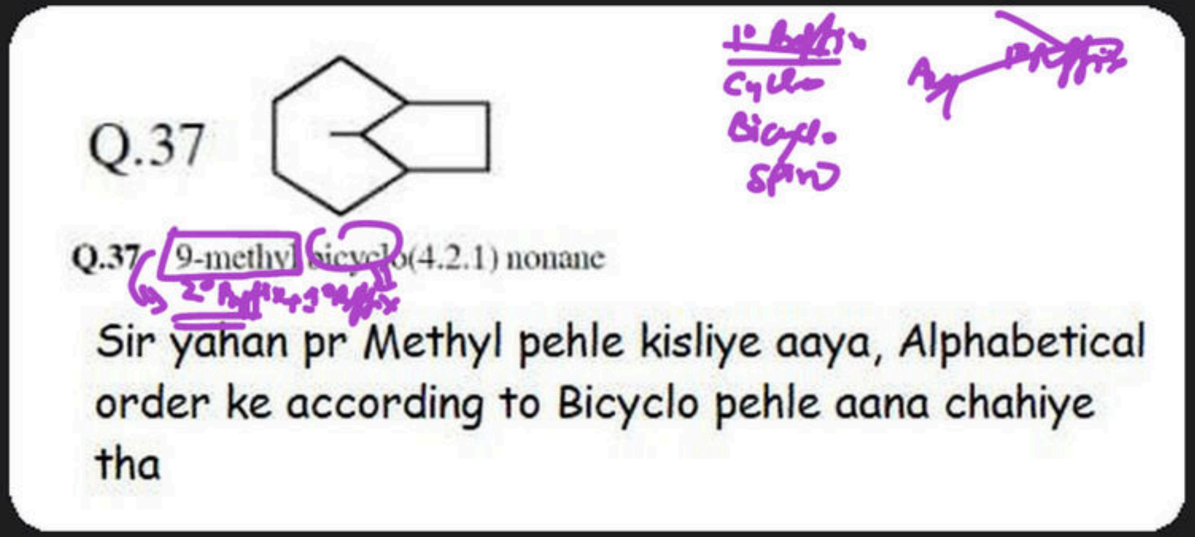
$1+3+5+5 = 14$



(1-chloro Toluene)

Question

from Aaditya Ag...



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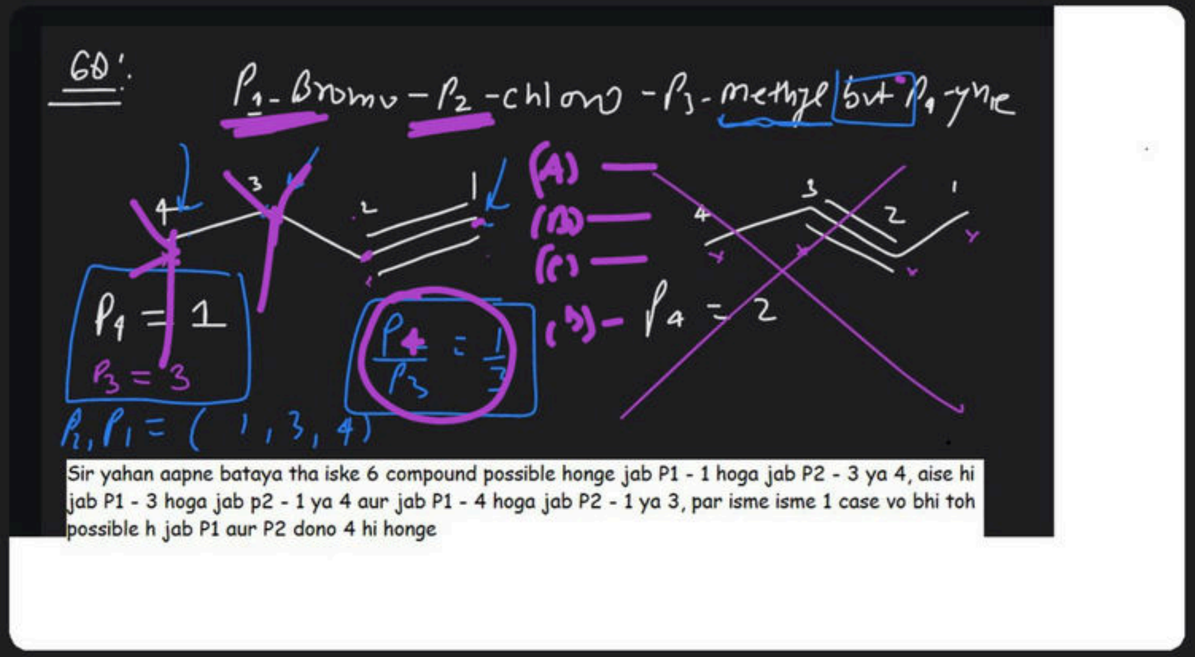
Question

from Aaditya Ag...



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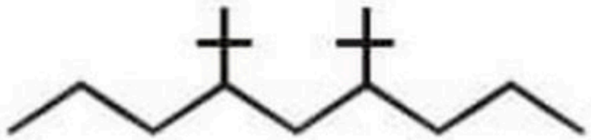
Question
from Aaditya Ag...

Q.11 

Q.11 4,6-Bis-[1,1-Dimethyl ethyl] Nonane

Sir ham IUPAC name m yahan Tertiary Butly kisliye nhi likh sakte un 2 side chain ko , ham Isopropyl toh likhte h IUPAC name m

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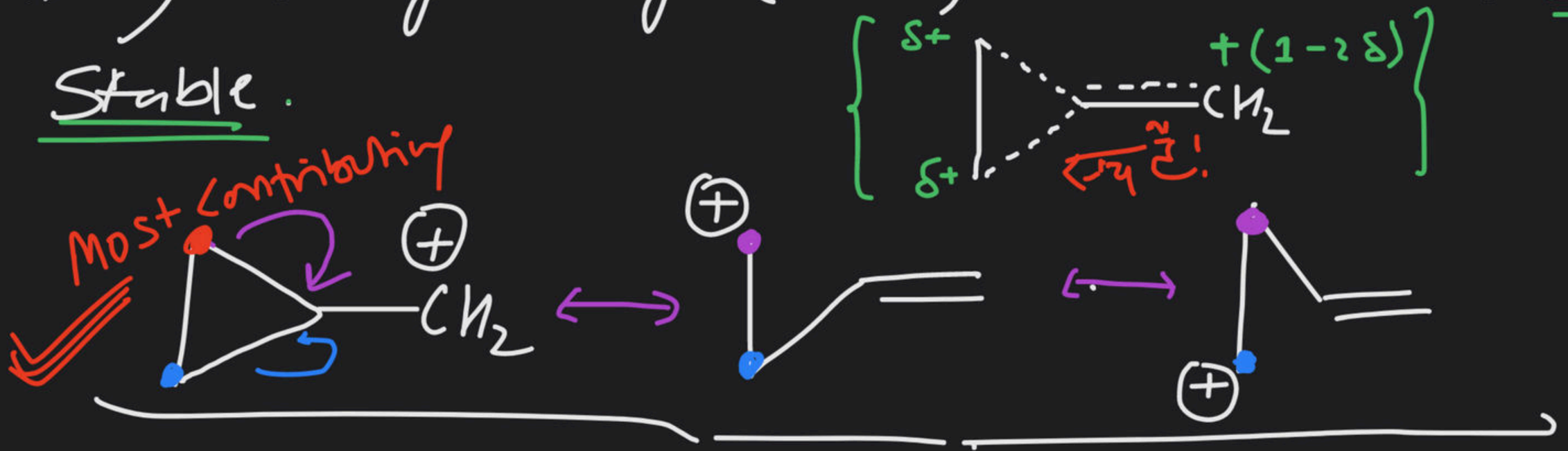
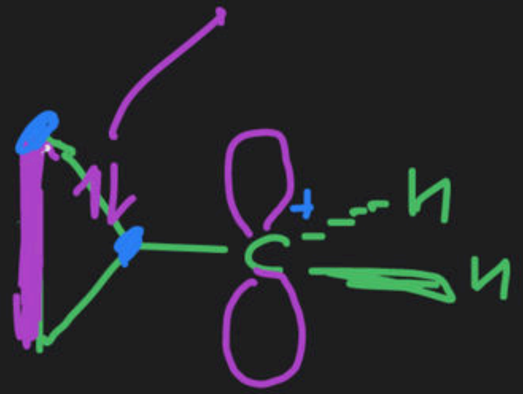
(#) Sigma Resonance

⇒ Cyclopropyl methyl (CPM) Carbocation is highly Stable.

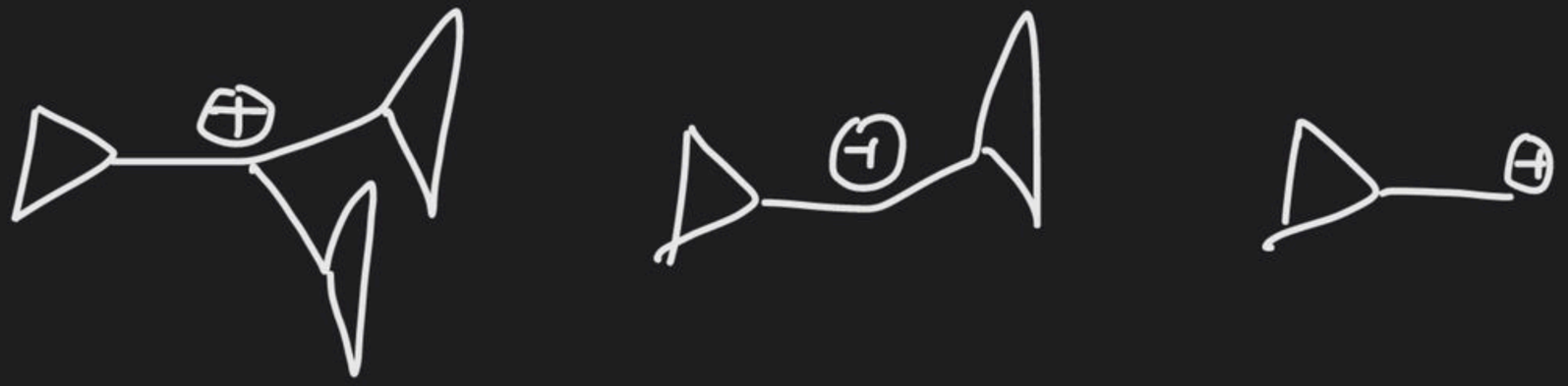




(1)

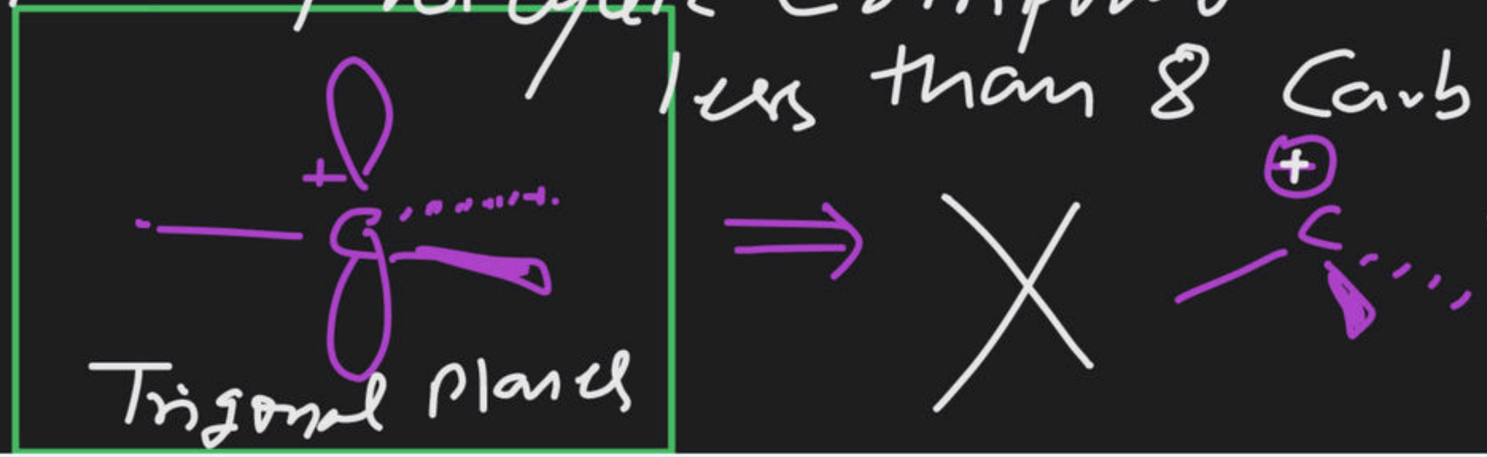
(1 > 2)

(2)

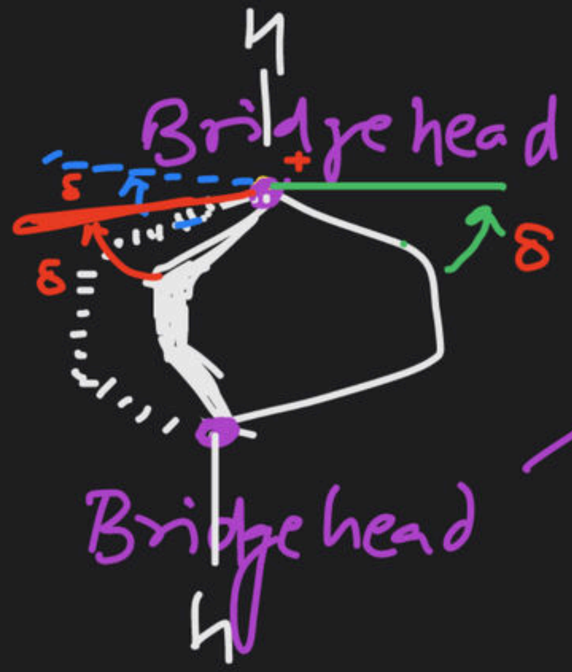


(1 > 2 > 3)

(#) **Bredt's Rule** planarity never can be achieved on bridge head of Bicyclic Compound containg 8 or less than 8 Carbon atom.



Bicyclo Compound



नहीं ये हो नहीं सकता

Cant be planer

("+" "•" "Allene")
sp^2 sp^2 sp^2

Note as well as length of bridge increases bridge head Carbon approaches planarity.

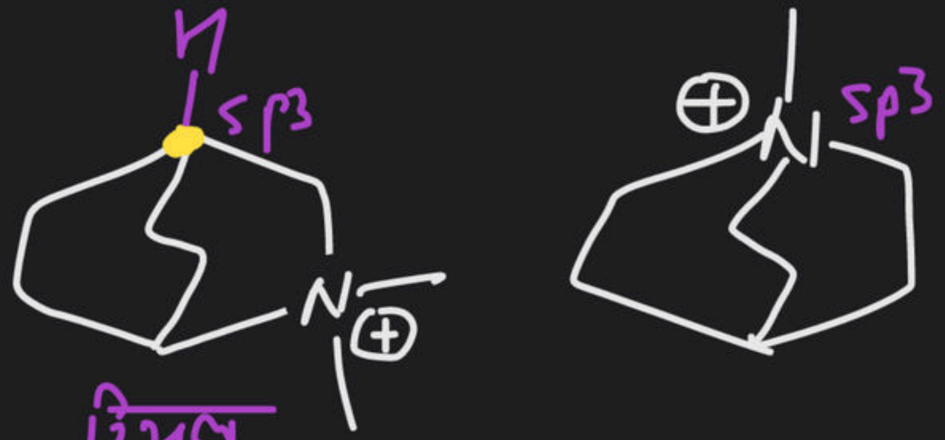
(1)

ना रियल

(2)

Na - रियल

(5)



रियल

A = B = ⊆ None

(3)

ना Real

(6)

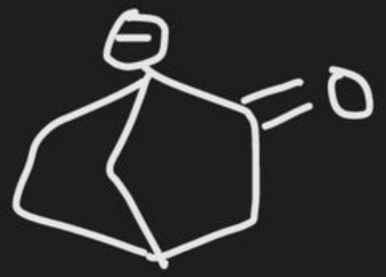
(Stability adv

(4)

ना रियल

(7)

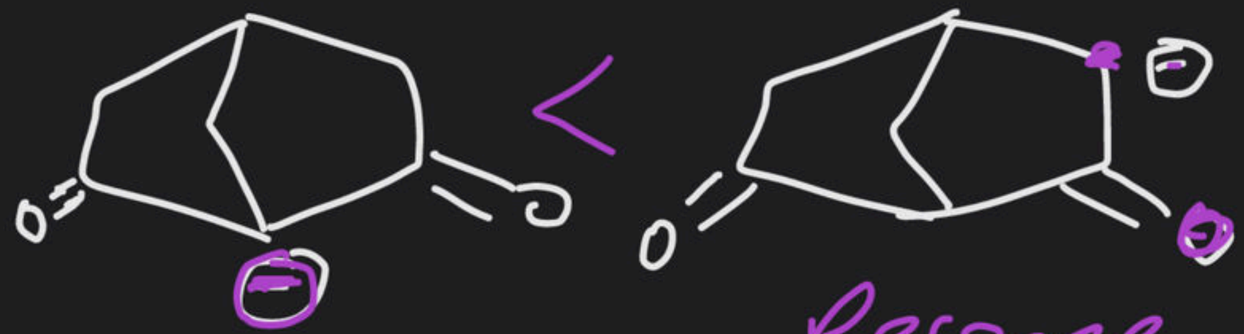
$\boxed{10c}$

(8) 

No Resonance

localised

(9)

(10) 

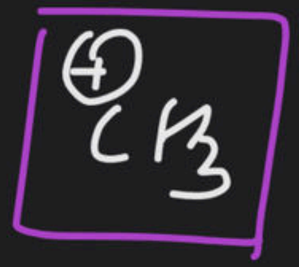
No Resonance :

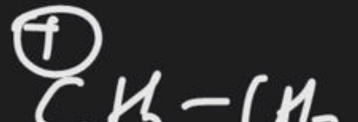
Resonance

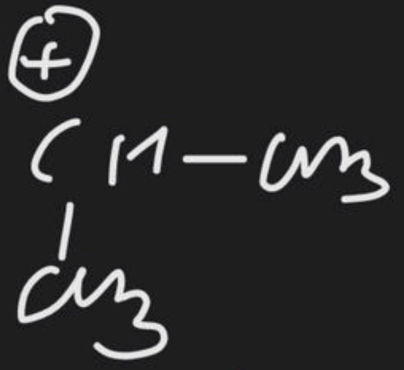
Stability of Intermidiates.

(R > H > I)

(1)

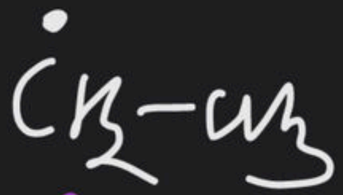


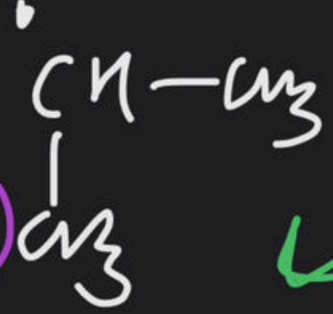




(4 > 3 > 2 > 1)

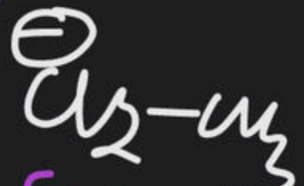
(2)



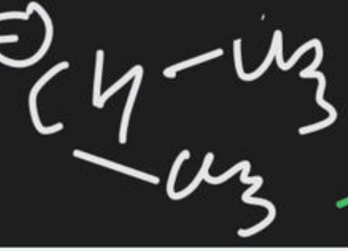


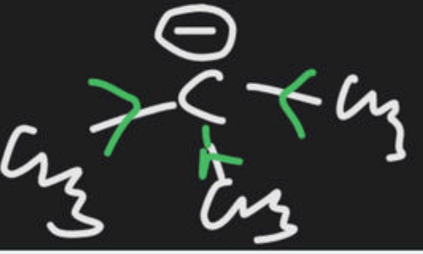
(4 > 3 > 2 > 1)

(3)



(1 > 2 > 3 > 4)





(4) CH_3 CD_3 CT_3

(5) Radical

(6) Carbanion.

(7) CH_2-CH_3 CH_2-CD_3 CH_2-CT_3

(10) CF_3 CCl_3

(13) CH_2-CH_3 $CH=CH_2$ $C\equiv CH$

(16)

(19)

(21)

(25)

(28)

(31)

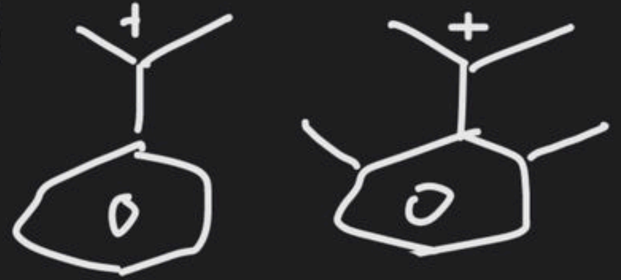
(34)

(37)

(38)

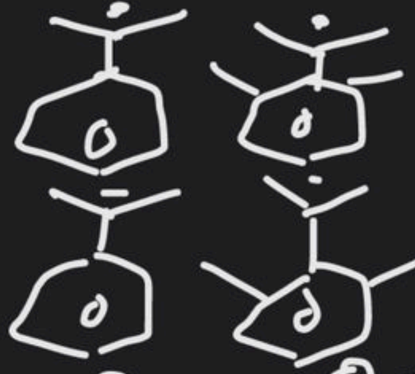
(39)

(40)



1 > 2

(41)

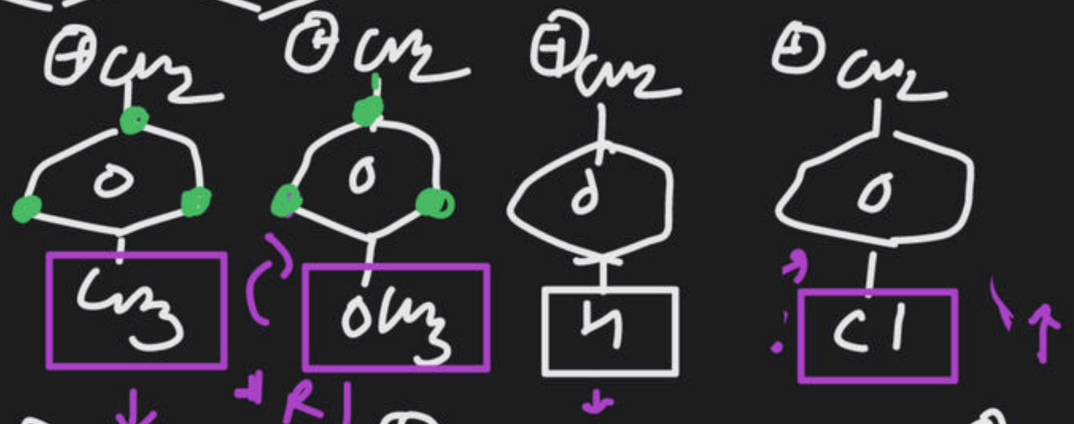


1 > 2

(42)

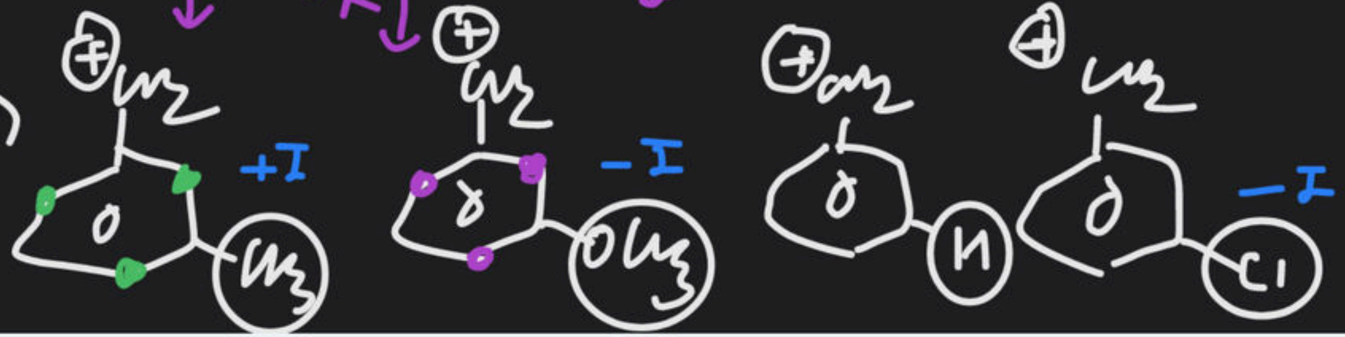
1 > 2

(43)



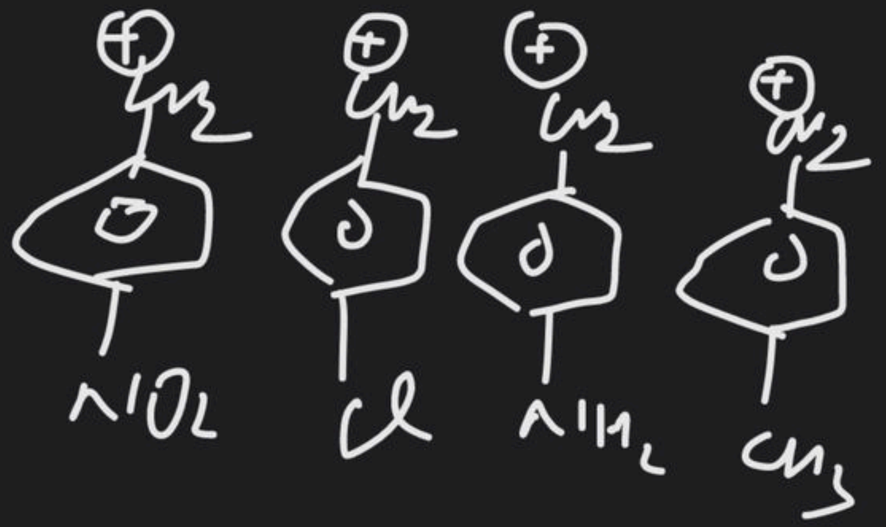
(2 > 1 > 3 > 4)

(44)



(1 > 3 > 4 > 2)

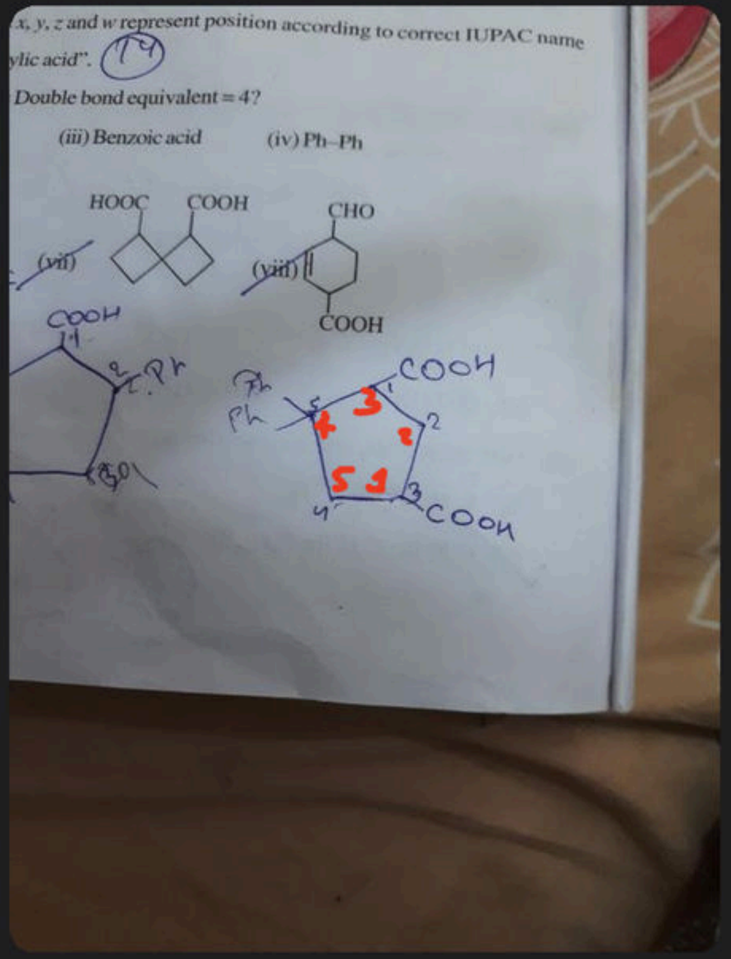
(45)



(46) — — — Meta

Question
from Monish

Sir isme kya gadbad??



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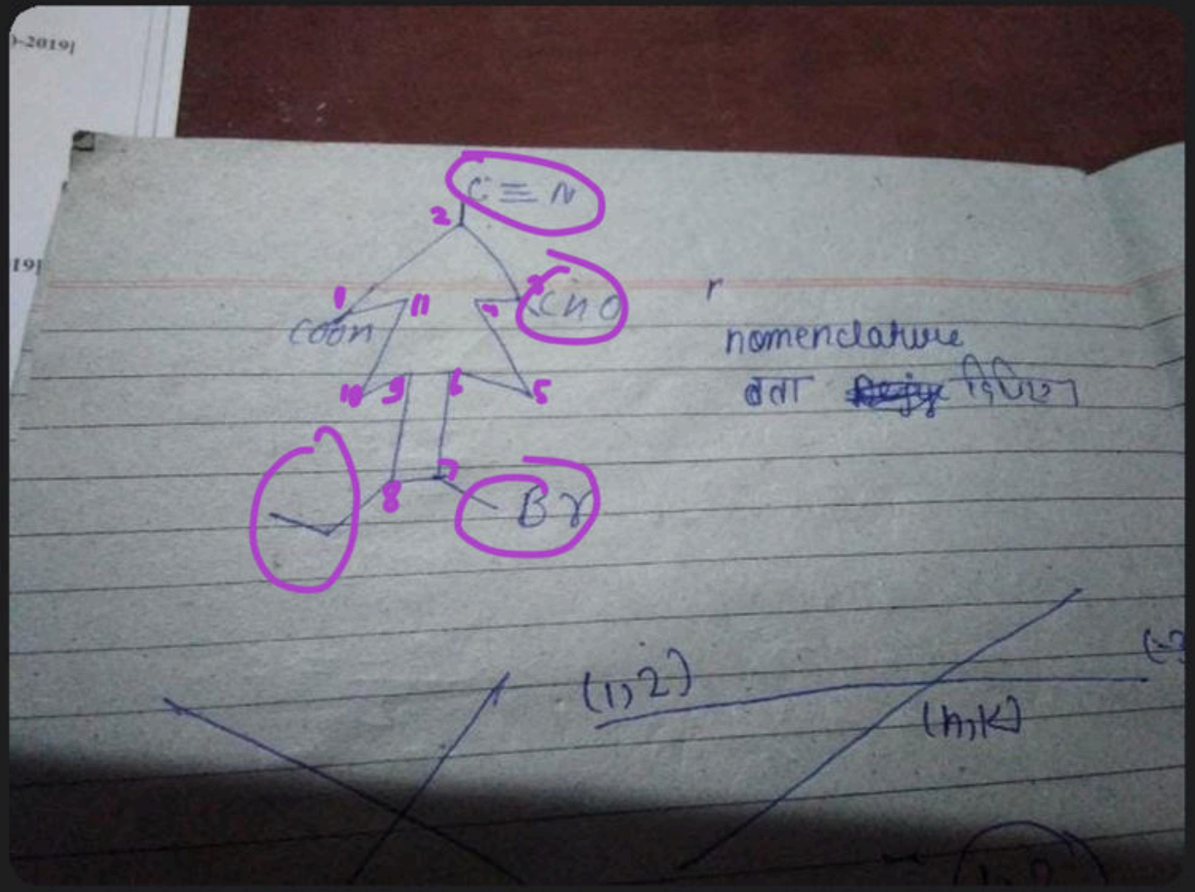
Question
from swati



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