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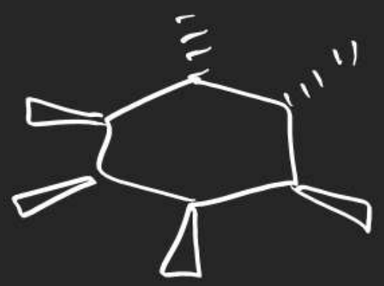
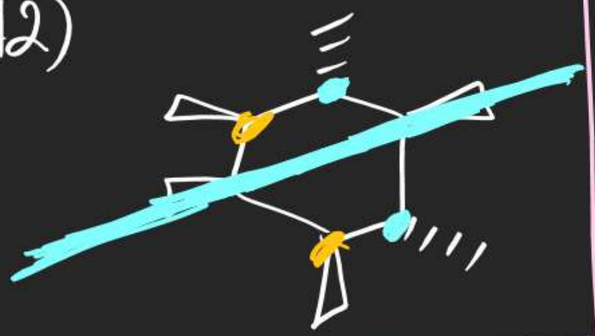
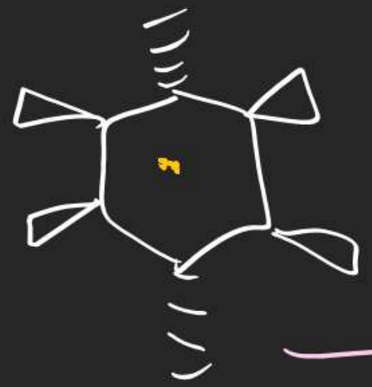
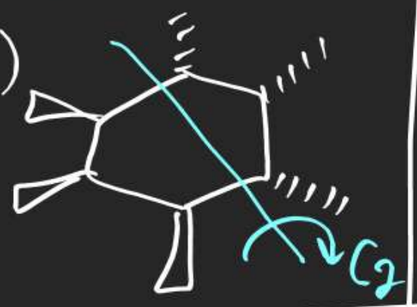
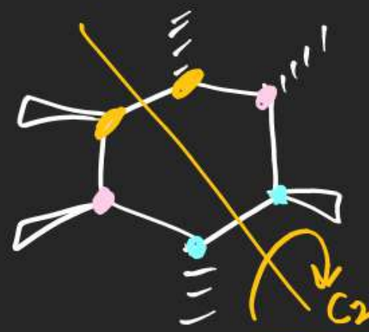
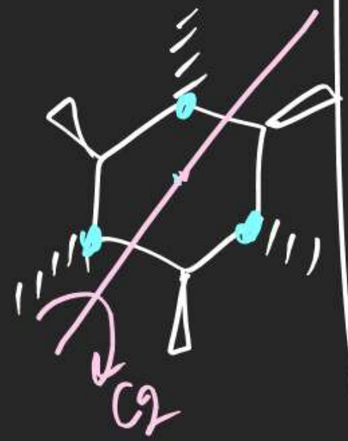
	POS	COS	AOS
(41) 	1	NO	NO
(42) 	1	NO	NO
(43) 	2	NO	$1C_2$

	POS	COS	AOS
(44) 	1	yes	$1C_2$
(45) 	0	No	$1C_2$
(48) 	3	yes	$1C_3 + 3C_2$

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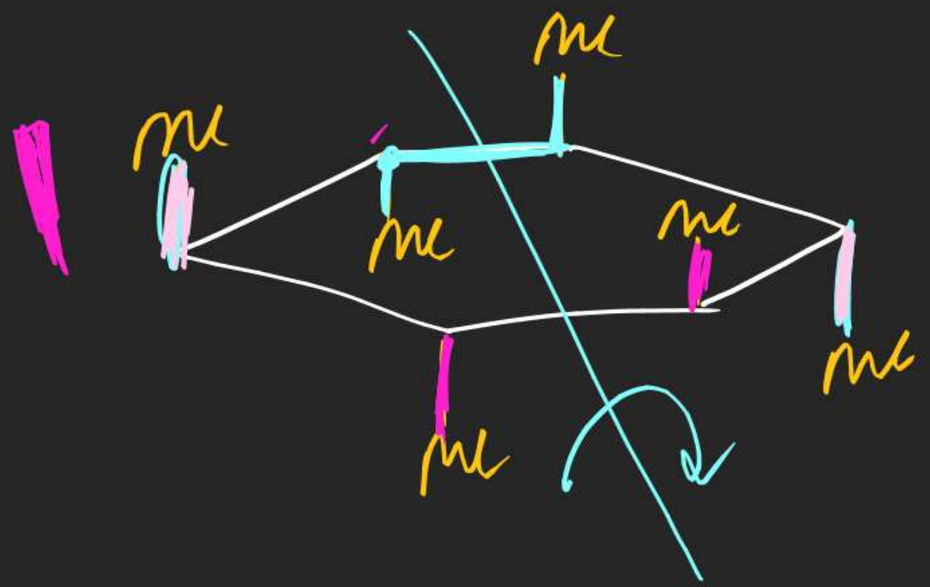

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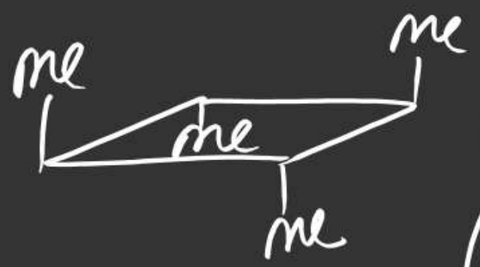
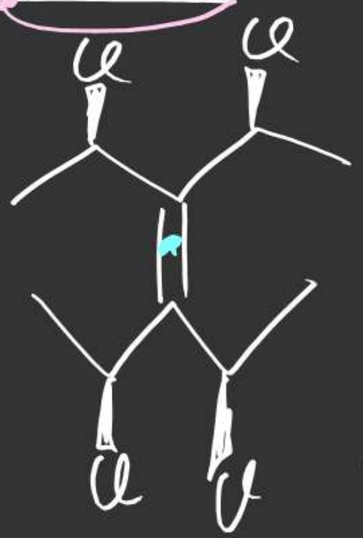
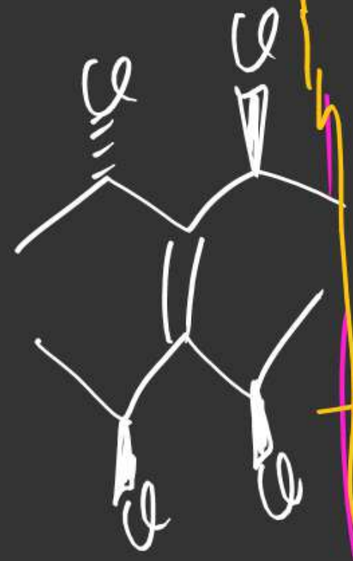
(48) 

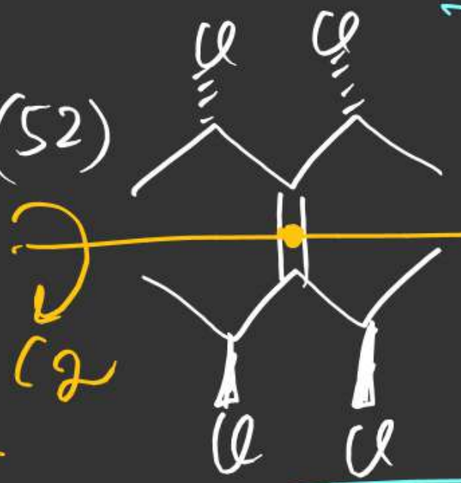
⇒ POS | COS | ADS
2 NO $3C_2$
(Across Diagonal)

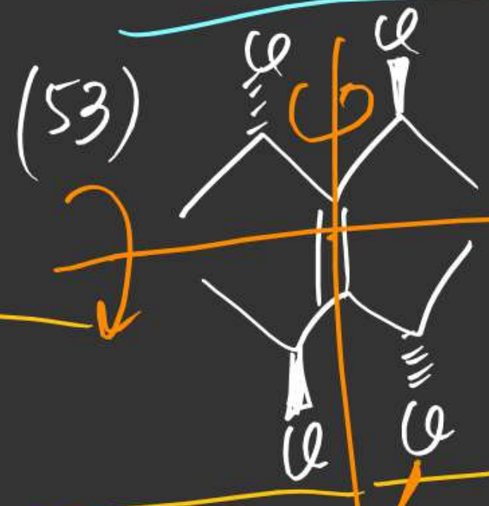
(49) 

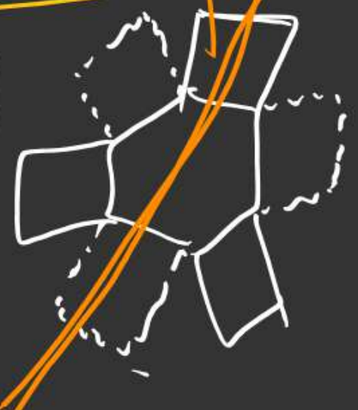
(50) 

(51) 

	3	NO	$1C_3$
	2	NO	$1C_2$
	0	NO	NO

(52) 

(53) 

(54) 

	1	yes	$1C_2$ (x-axis)
	0	No	$3C_2$ (x-axis, y-axis, z axis)
	3	yes	$1C_3$ + $3C_2$

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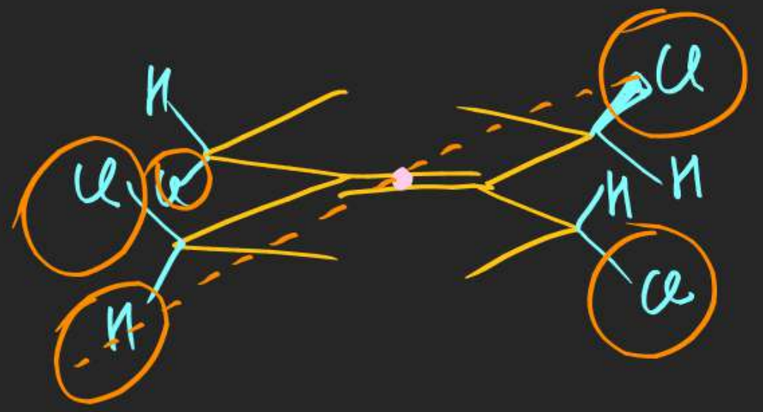

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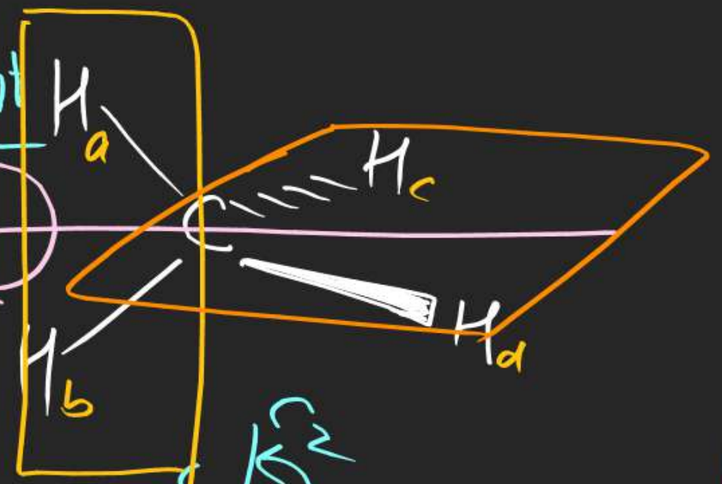
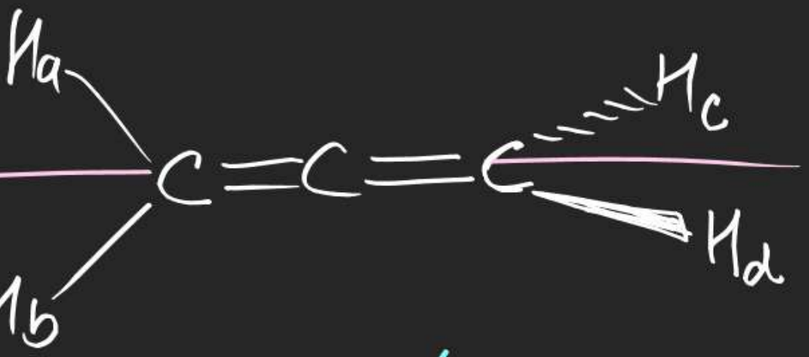
Left to Right

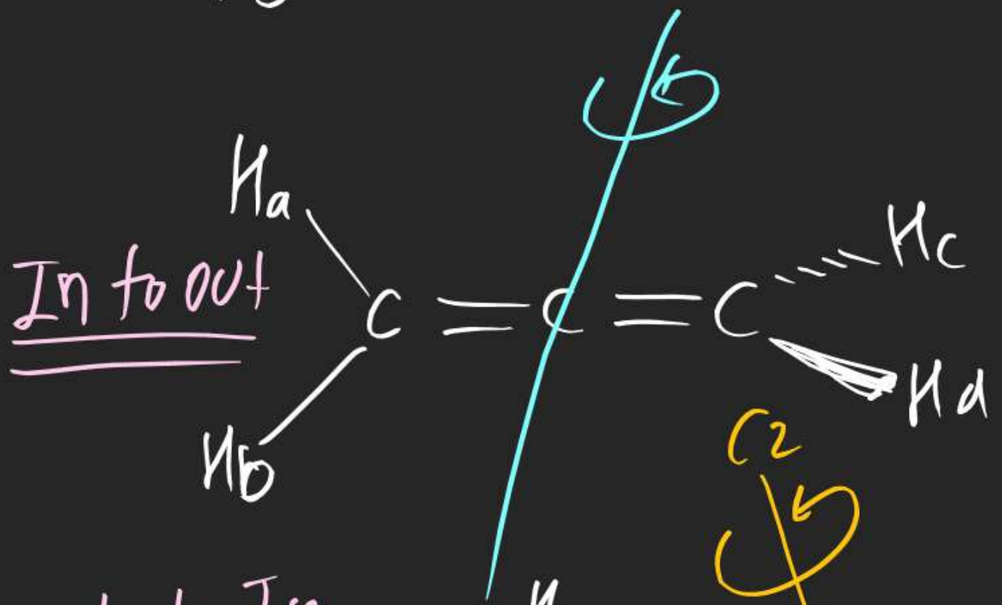


(Ha Hb)

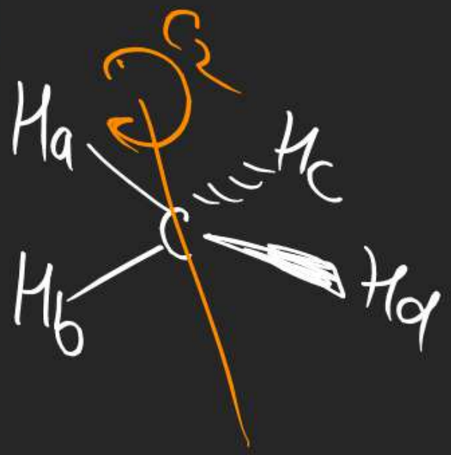


In to Out

(Ha Hc)

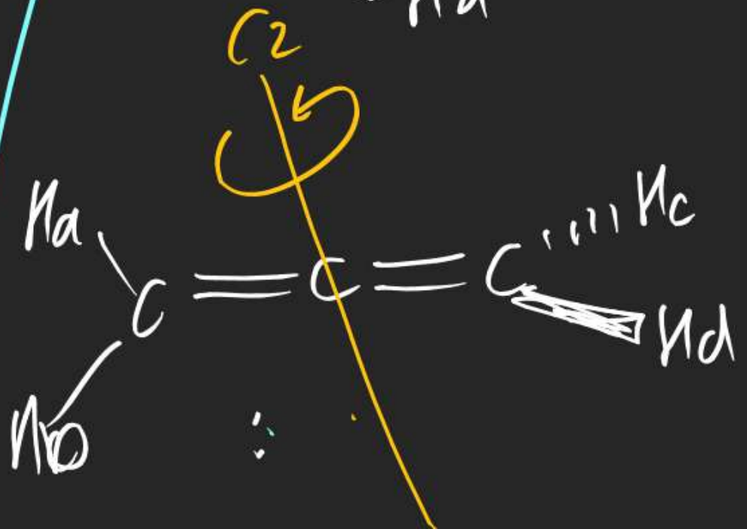


Out to In



(Ha Hd)

Out to In



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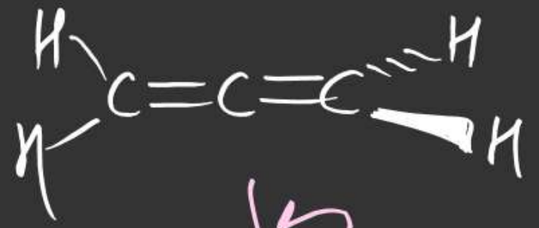
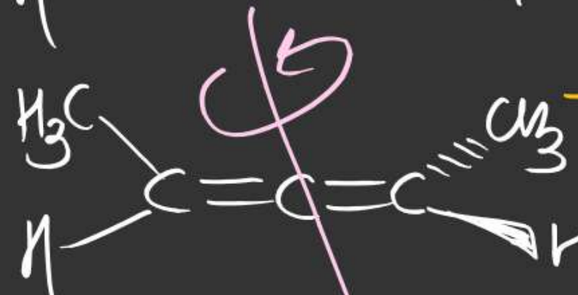
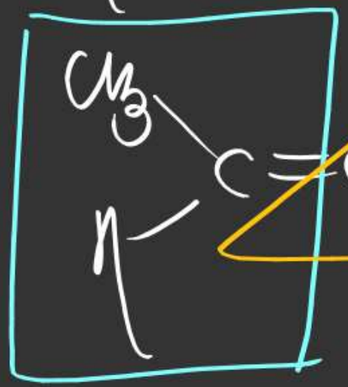
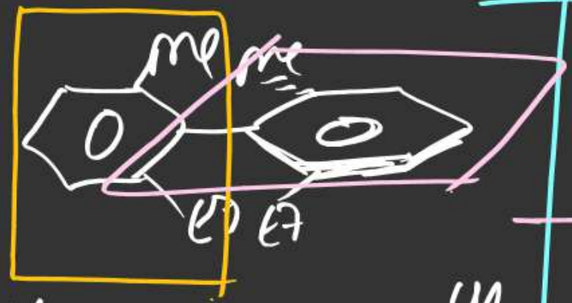
(55) 

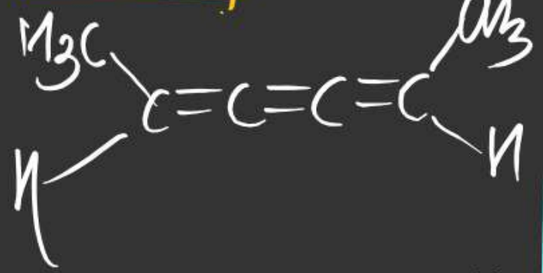
(56) 

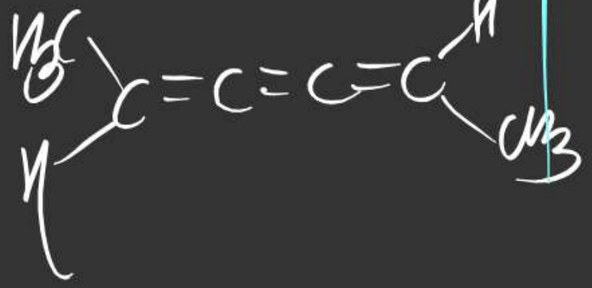
(57) 

(58) 

POS	COS	AOS
2	NO	$3C_2$
0	NO	$1C_2$
1	NO	NO
0	NO	$1C_2$

(59) 

(60) 

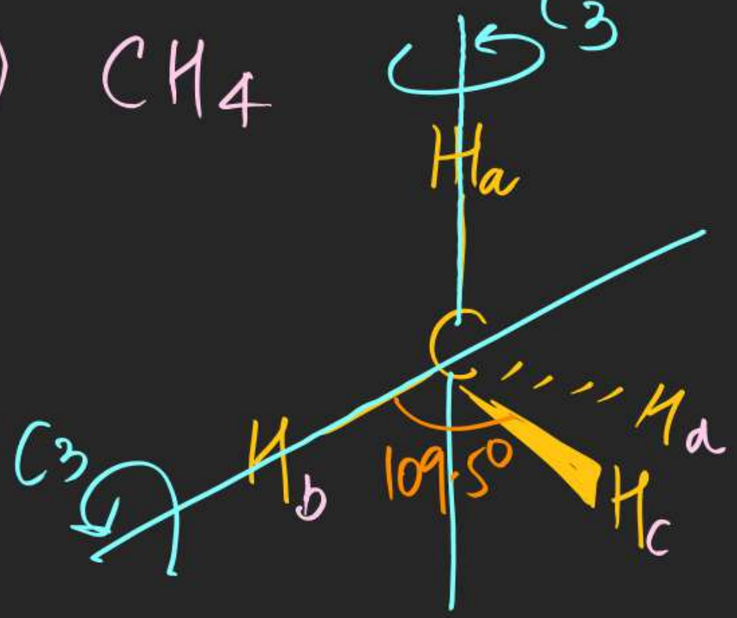
(61) 

(62) 

0	NO	$1C_2$

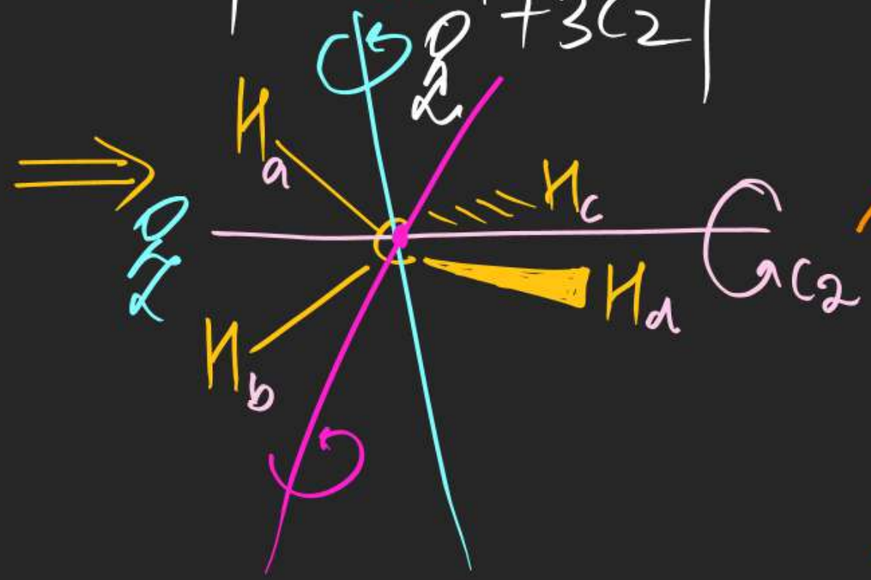
(#) CH_4

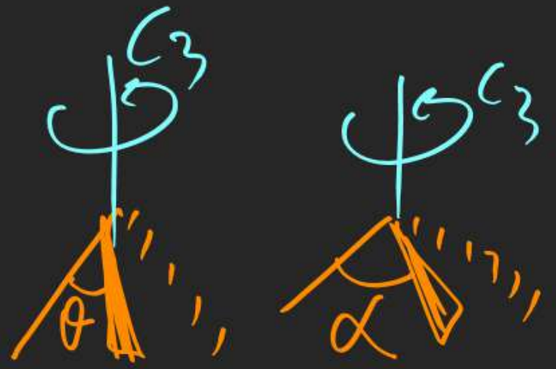
POS	COS	AOS
6	NIL	$4C_3$ $+3C_2$

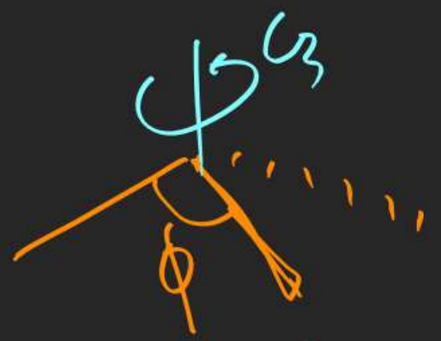


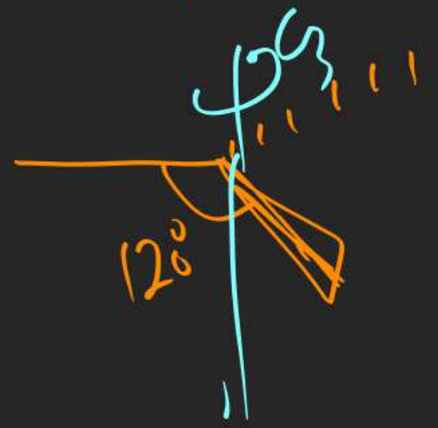
$4C_3$

(across Each C–H Bond)









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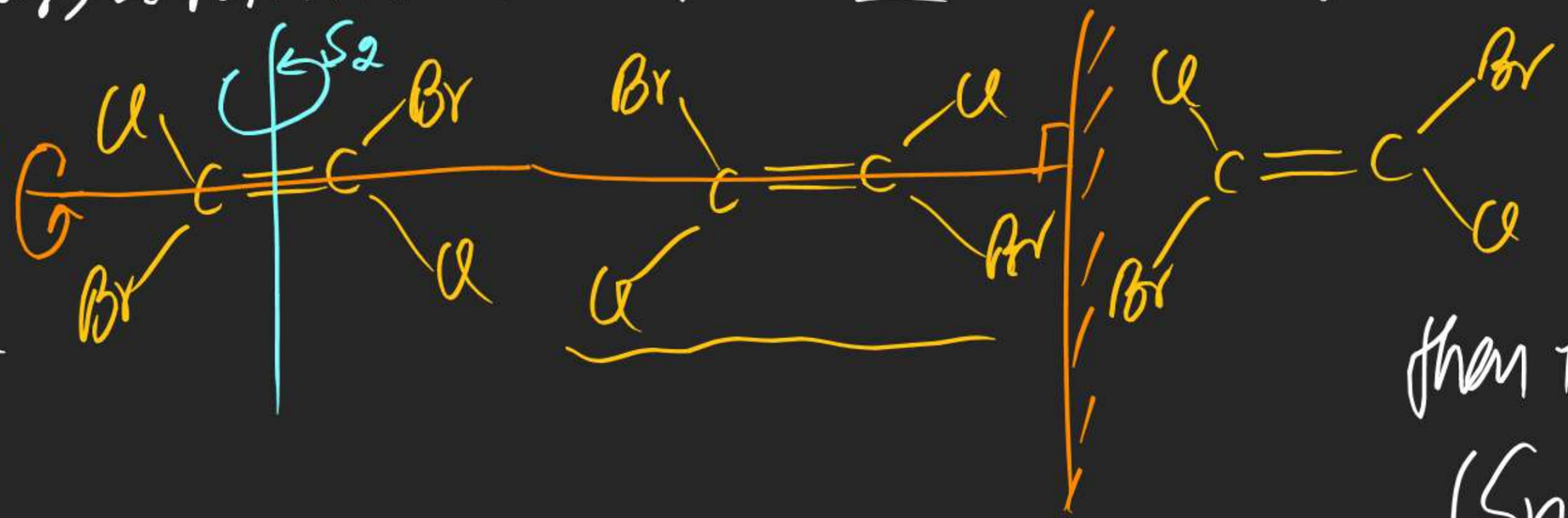
STEREOISOMERISM

(#) Alternating Axis of symmetry :- (AAOS)

⇒ It is defined as a imaginary line across which compound is Rotated By $(360/n)^\circ$ & then Reflected across a mirror which is in ⊥ direction of initial line, if final appearance is exactly same as initial appearance then that line is called (Sn AAOS)

(69)



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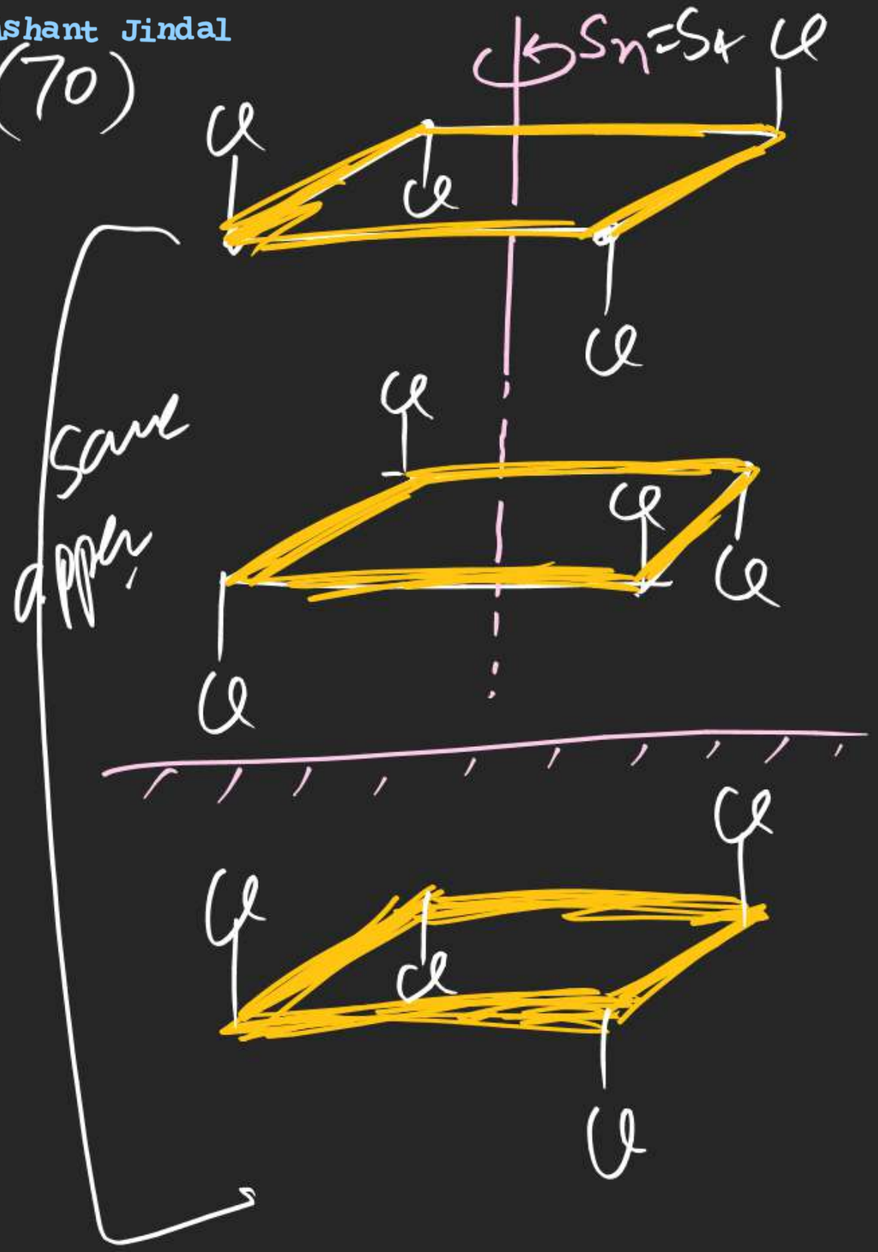
(70)



Find "n"

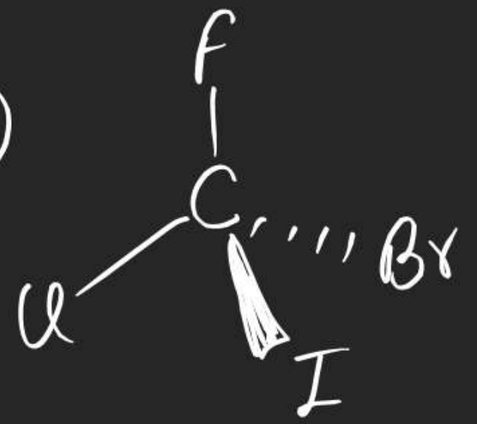
$n = 4$

S_2	180°
S_3	120°
S_4	90°
S_5	72°
⋮	⋮

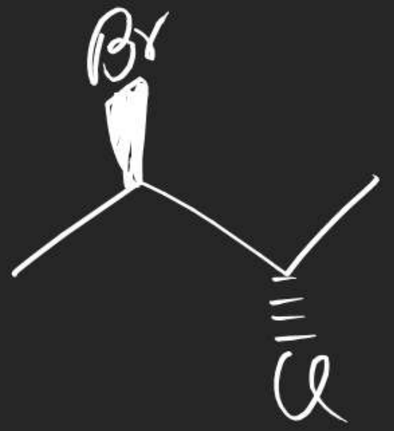
(#) Asymmetric Compound:- [All AAAA absent] → asymmetric

Compounds having absence of All symmetry are known as asymmetric compounds.

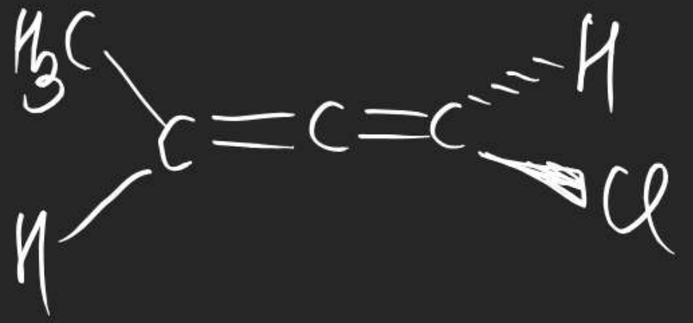
Ex:-(1)



Ex-2:



Ex-3:



(#) Dissymetric Compound:

Compounds having only Cn (AOS) are known as Dissymetric Compounds.

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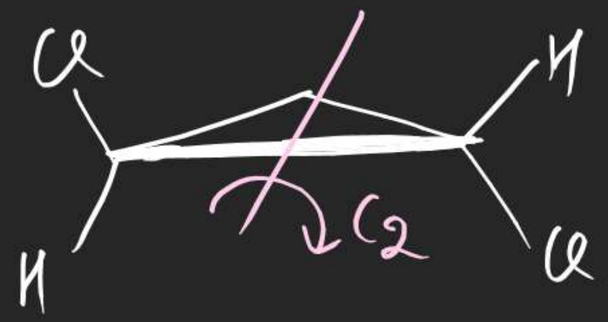
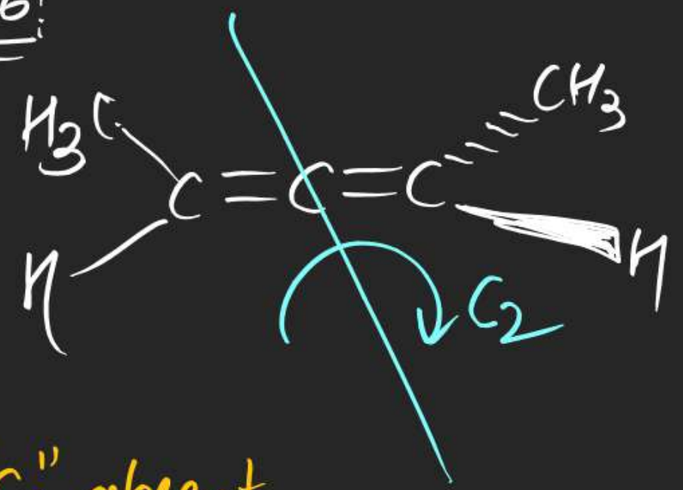
Ex-4 :-



Ex-5

Ex-6 :



Note : ①

Compound —"Sn" absent→ Dissymetric Compound —"Cn" absent→ Asymmetric Compound

(Cn present) (C1 present)

② All asymmetric compounds are dissymetric compounds

But converse is not true.

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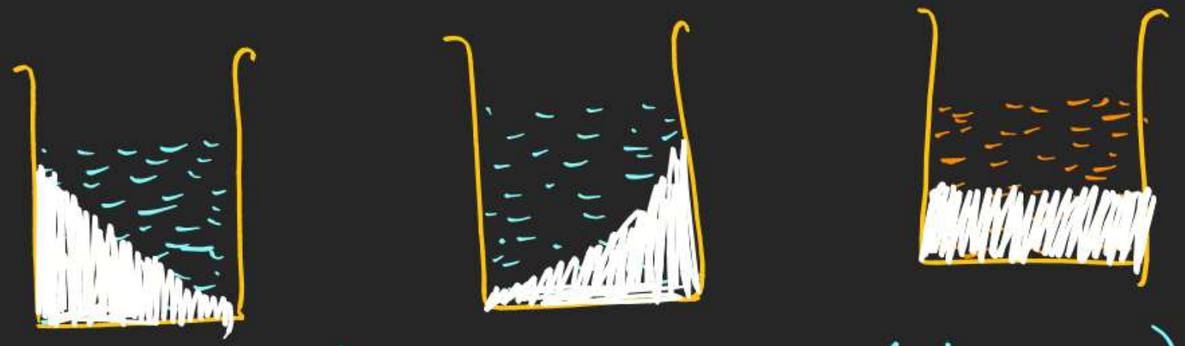
(iii) (1 page Blank)

Optical Isomerism

Compounds having same molecular formula & same structural formula But different behaviour with light ( ) are known as optical isomers

Ex-1 :-



($\alpha_{obs} = +\theta$) ($\alpha_{obs} = -\alpha$) ($\alpha_{obs} = 0$)