

Case II In C.N. = 6 \Rightarrow Octahedral geometry.

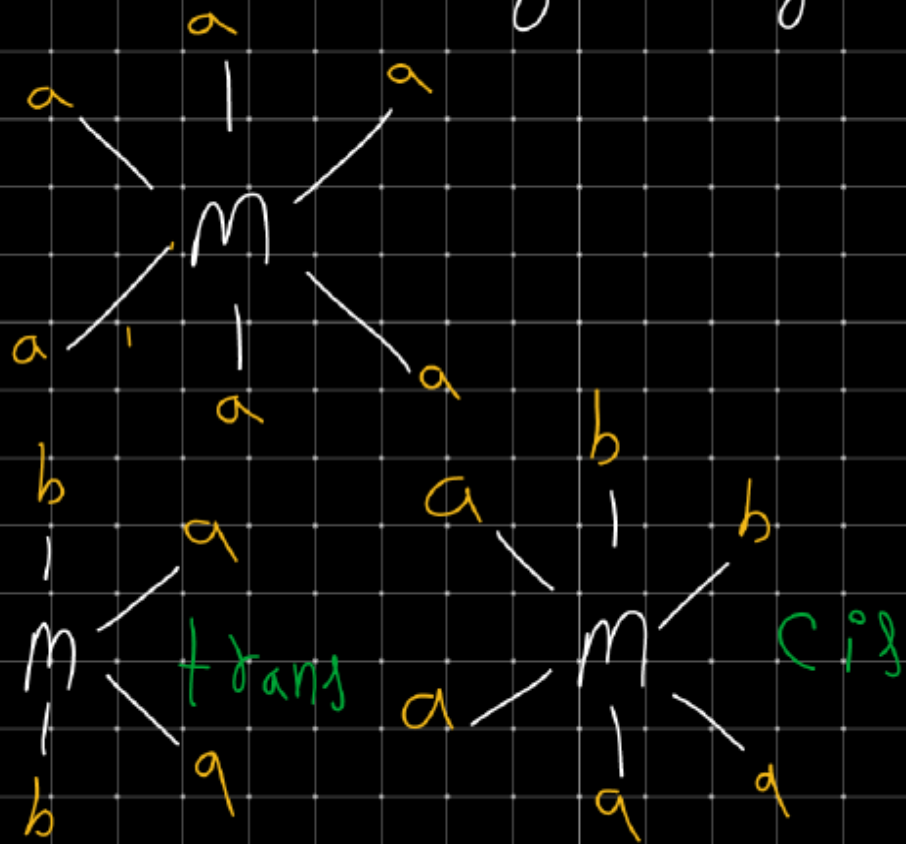
(1) Ma_6 No G.I.

Ma_2bc

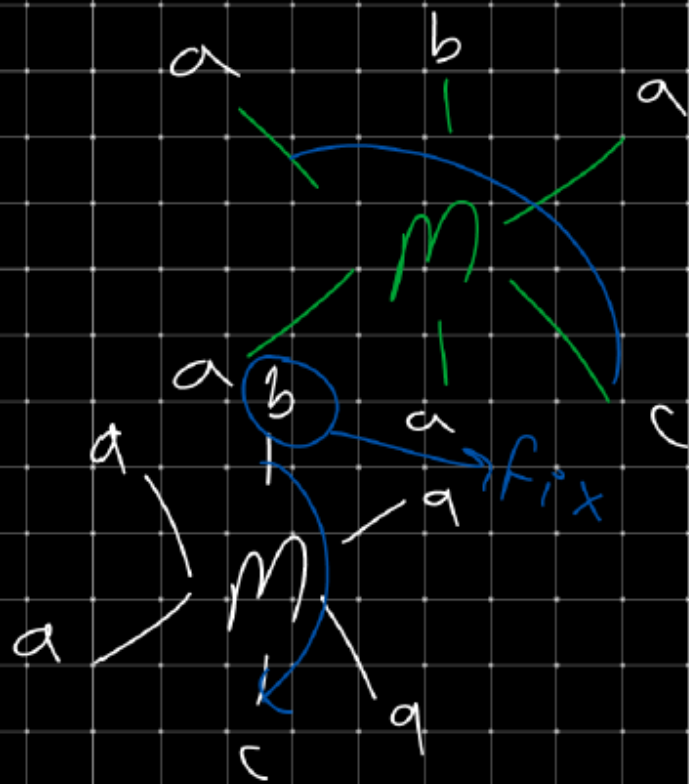
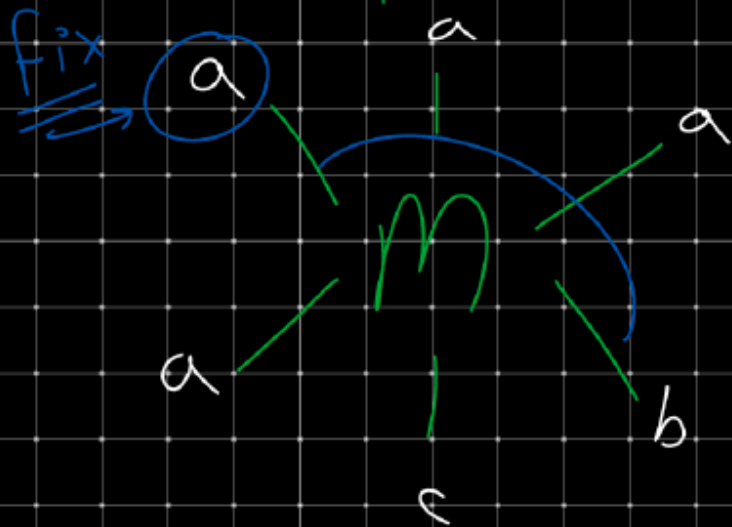
(2) Ma_5b No G.I.

Ma_4bc
 $\hookrightarrow 2$ G.I.

(3) Ma_4b_2
 $\hookrightarrow 2$ G.I.



maybe



Complex

ma_4b_2

$ma_4\underline{b_3c}$

$ma_3\underline{b_3}$

$ma_3\underline{b_2c}$

ma_3bcd

$ma_2\underline{b_4}$

Same
at I

same

same

No. G.I.

2

2

2

3

4

5

Complex

ma_2b_2cd

$ma_2\underline{bcde}$

ma_2bcdef

a, b, c, d, e, f
monodentate.

No. G.I.

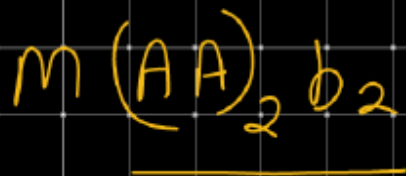
6

9

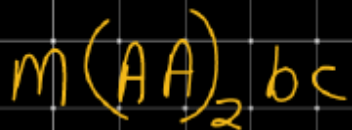
15

Complex

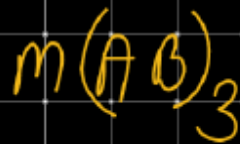
No. G.I.



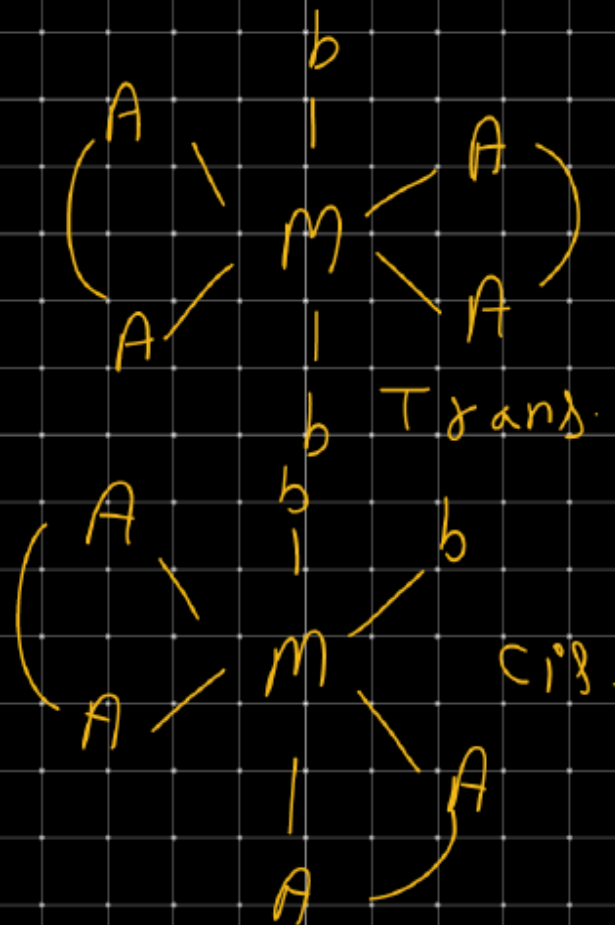
2



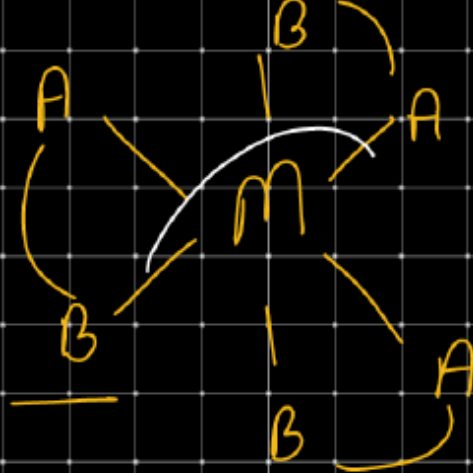
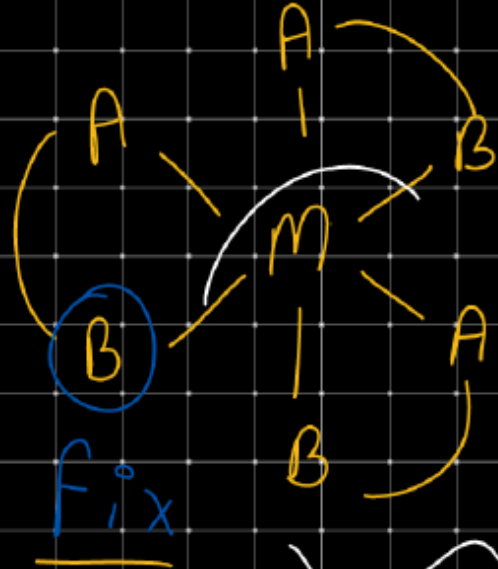
2



2

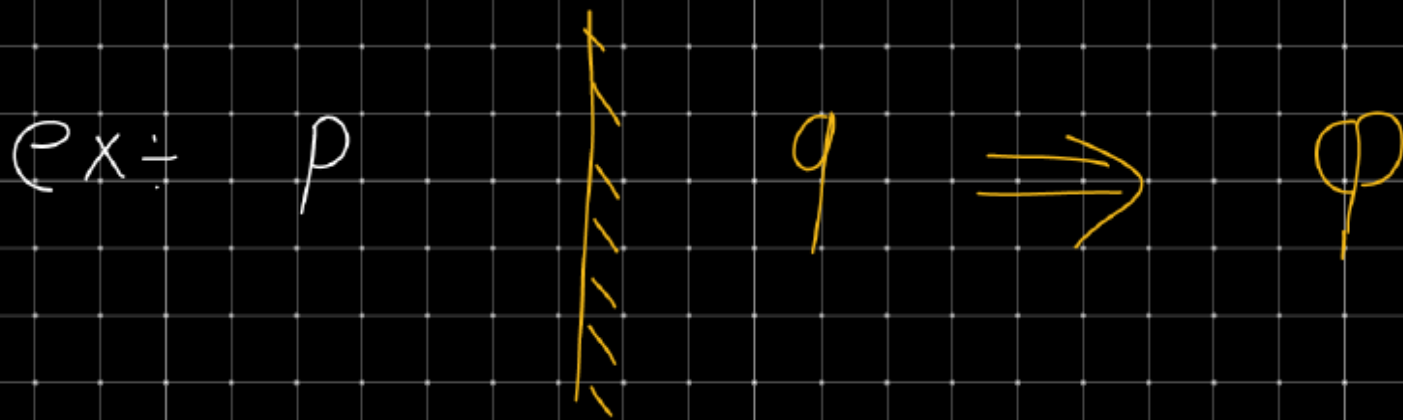


$m(AB)_3$



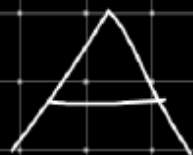
2 G.I.

Optical isomer $\frac{2}{2}$



Non super impossible mirror image.
p & q, enantiomers, optically
plane of symmetry absent active

Ex^o



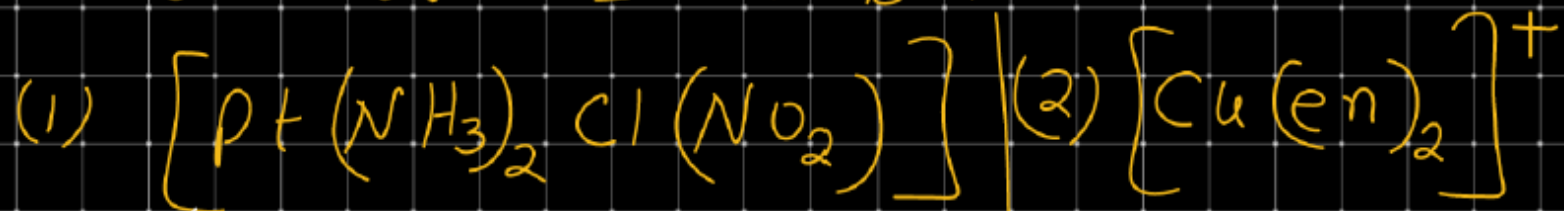
- # Super impossible image
- # optically inactive [O.I not]
- # P O S present.

$$\underline{\underline{C.N. = 6}}$$

<u>Complex</u>	<u>No. G.I.</u>	<u>Optical isomer</u>	Total no of isomer
ma_4b_2	2	0	2
ma_4bc	2	0	2
ma_3b_3	2	0	2
ma_3b_2c	3	0	3
ma_3bcd	4	1	5

Complex	No. G.I.	O.I.	Total
$ma_2b_2c_2$	5	1	6
ma_2b_2cd	6	2	8
ma_2bcde	9	6	15
$mabcdef$	15	15	30
$m(AA)_2b_2$	2	1	3
$m(AA)_2bc$	2	1	3
$m(AB)_3$	2	2	4

Ques. Identify which Complex exhibit
G.I. or O.I. or Both.



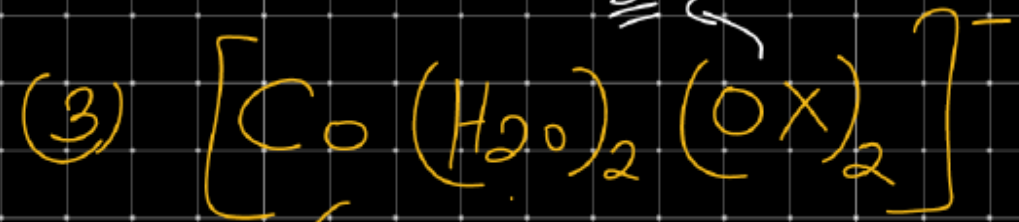
Sol. C.N = 4 O.I. X

$\rightarrow m a_2 b c$ G.I. ✓

$\rightarrow 2$ G.I.

$m(AA)_2 \rightarrow$ G.I. X
 \swarrow
C.N. = 4 \rightarrow O.I. X

B_i



C.N. = 6

O.I. ✗

G.I. ✓

$m a_2 (AA)_2$

$m (AA)_2 b_2$

1

2

3

