8 Optical Figuresian: For a compound to be optically active of (i) It should not be superimposable on its mirror image (ii) It should not contain any showent of symmetry Case 2 - C V Department in age

Case 2 - C V Department in age

Case 3 - V Department in age

Ca 93000MY: (\$1500M-117119) Polarized Kight: 7 Kotaly in Rightdight Impdarized Mid pion Polarized Polarized Night (calcited) Right (PPL)

To check if compandis optically active rolt destro (de dochise) Rotates in Nettales in leave (l) (attraction) # Plane Polarized Light (PPL): 1) If the compound notates PPL in clothwise / Right direction Then it is death [denoted by d)+] 2) If the compound rotates PPL in anti-clockwise / left direction. Then it is leave [denoted by l]-]

Superimperally Misson Image (optically inadire) No Optical Isonerlas Non Superingerable History Inage

D'Alexandra Ironard

OI) (optically active) Non-Super imposable Mirror Lange
-: Has 20:I (optially active) - Plane of symmetry : < bet: - Lists 90 Lists
Lists 90 Lists Hence, Square planner complexes never show Optical Isomerism.

(due to presence of plane of symmetry > P.O.S) CN=6 Non- Super in posable M.I : Has 2 0. I bidentate ligand Eq - Go (en)2

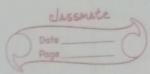
Case 2: [M(AA), B] -> 2G/I (cis & trans) (A) A) (A) Superimposable H) I

B (Prand) (B) (optical Isomer

B (optically) (nactive) (A) M A (iis) B M A) Non-SuperImporable M. T.
A (optically that 20-I) Total no distoriousness = No. of G.I + No. of O.I = 2+2 = 4 Frick to check Optical Isomerism: If the pairs have some type of ligand [eg. (aa) type]

more than one same pair [eg. (ab) (ab) type]

Then, The compound is Optically inactive Gasos:Total - Maa) (aa) (aa) (aa) & More Han I surrepeiro
- Optically inactive (2) - [Magb] > M(ab) (aa) (ab) 3 Hore than I same peir Optically instine (3) - [Maybe] - M(aa)(aa) (ab) - More Han I same peir M (aa)(ab) (ab) - More Han I same pair That 2 Cr. I but no O. I . Optically mactive (1): [Mastes] -> M (aa) (ab) (bb) -> Same type of ligand (aa), (et) M(a)(ab)(ab) -> More them 14 same pein Optically inactive



| - | - (5)= [Mazbed] -> | M(aa)(ab)(cd) -> Same type of ligand (aa) |
|---|----------------------------|---|
| - | 46-1 | M(aa) (ac) (bd) - Same type of ligand (aa) |
| + | | M(aa)(ad)(cc) (aa) |
| + | | M(ab)(ac) (ad) Different Gands Optically active OI < 32 |
| 1 | · Total no determine | optically active de 32 |
| 1 | Jane y Mycholseme | = Word GI + No. of O. I = 4+2 = C |
| | Complex | No. of Optical Isoners |
| | [MA4B2] | 0 |
| | [MA4BC] [MA3B3] | 0 |
| | [MA3BCD] | 2 |
| | [MA, B, C)] [MA, B, CD] | 12 |
| | [MAZBONE] (MABODEF) | 30 |
| | [M (AB) ₃) | 4 |
| | [M (AA)2] | 2 |