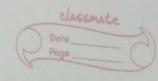
	Date
	Page
	I somerism in Coordination Compounds
	Two or more compounds having same molecular formula but deferent one or more arrangement of atoms/ indexular due to which they differ in one or more physical properties / chemical properties.
	Two or more compounds having same mountains to
	arrangement of atoms Indeculer due to which my affect
	physical properties / chemical properties.
TH. 789	Such compounds are called isomers & thisphenomenon is isomerism
1	Stanting Temperin
7	- Structural Isomerism -
(.)	1 1. t. To a:
	Coordination Isomerism
()	
(11)	Hydrate Isomerism
	" Ingeld Obtilate in their valence shell
(iii)	Linkage Isemerism
	Louised miletimo L Apit
(1)	Tigand Isomerism
(17)	rugary
	Stereoisomerism; -
7	2 Willerson Courts, +
()	Grometrical isomerism for CN = 4,6
(1)	Geometrical isomerism [For C.N = 4, 6]
	OLA. [n u u u]
(11)	Optical isomerism
0	datales simula fallat philated.
	alle philipping de H.
	· Law Louiselien Political
	evel, "Ay "T



Structural Isomerism = Compounds having some molecular formula but different structural formula 2 Coordination I somerisme In this isomerism, there is exchange of ligands completely/partially bet ationic & anionic complexes Eg: [Cr (NH2)6] [Co (CN)6] -> Kationic Anionic complex Co (NH₃)6) [Gr (KH₃)6] There is enchange of NH₃ & CN

Here

Cr (NH₃)6] [Gr (KH₃)6] There is enchange of NH₃ & CN

Prerage. x + 6×0 + x + 6(-1) = 0

There is enchange of NH₃ & CN

(Cr (NH₃)6] [Cr (NH₃)6] [Cr (NH₃)6]

There is enchange of NH₃ & CN

There is enchange of NH₃ & (i) [Gz (NHz)g (CN)] [Co (NHz) (CN)] = [G(NHz)g(N]=+3+0+(1)=+2] [6(NH3)(CN)5]=+3+0+(-5)=-2 (ii) [Cr (NH3)4 (CN)2] [Co (NH3)2 (CN)] = [Cr (NH3)4 (CN)]=+3+0+(-2)=+1 (6 (NH3)2 (CN)4] = +3+0+(-4) = -1 (iii) [(x (NH3)3 (CN)3] [(o(NH3)3 (CN)3] = [a(NH3)(CN)3] = (iv) [Co(NH3)6] [Co(CN)6] = (6(NH6)6] = +3+0=+3 [Co(NH3)6] = +3+(-6)=-3

3 Solvate/Hydrate Isomerism When water is used to, then it is called Hydrate isomerism" In this isomerism, H2O - act as ligand as well as water of inglation Fg: - [G(H20)](l2 -> [G(H20)]#3(l Answer: x+(0x6)+(-3)=0 Take a inside complex and corresponding 140 outside complex Hydrate Isomere are: (Here, O.N. of Gr = +3)

(i) [(r (H2O)_5 a)]^2(l_2 H_2 O :- [(c)(HO)_5(l)] = +3+0+(-1)=+2 (ii) [(x(H20)4(l2) (12H20:-[Gr(H0)4(l2]=+3+0+(-2)=+1 (iii) [(x(H20)3(l3)-42-3H20=(6(H20)3l2)=+3+0+(-3)=0 the that somerism does [Gr (H2O)6] (6 (CN)6] show and why? SI: The cationic anionic complexe [(r(H2O)6][(o(CN)6]]
Shows (oordination isomerism Because Exchange of ligands take place However, this is not Hydrate Isomerism Because this type of isomerism is more focused on the ligard exchage within the complex's cationing anionic about individually rather than bet two conformats Hydrate isomerion applies to scenarios involving hydrate state of a single entity rather other interaction across cation-anion pair

VBGYOR 3 hinkage I somerism This isomerism occurs when there is ambidentate ligand & links to CMA [g-0[6(NH3)5(ONO)](l2 & [6(NH3)5(NQ)](l2 yallow (absolution light) red (absorbs green light) Here, Pentalammine nitrito & Pentaamine nitrito -N - O cobalt (III) chloride cobalt (III) chloride red (absorbe green ligh) Here, Hexathiocyanato yellow to green greenishyellow Here, Tetra yanato Chromium (II) Why 3 -> greenish yellow and not red? Sell- [Cr (CN) y] is a tetra complen [= 40]

Splitting of d-orbitals is weakened but due to strong field nature of (N) The overall color of this complex becomes greened yellow