

M.H. Khan D<sub>2</sub>S<sub>2</sub> D-4-20 (47) Thu

Inorganic (coordination)

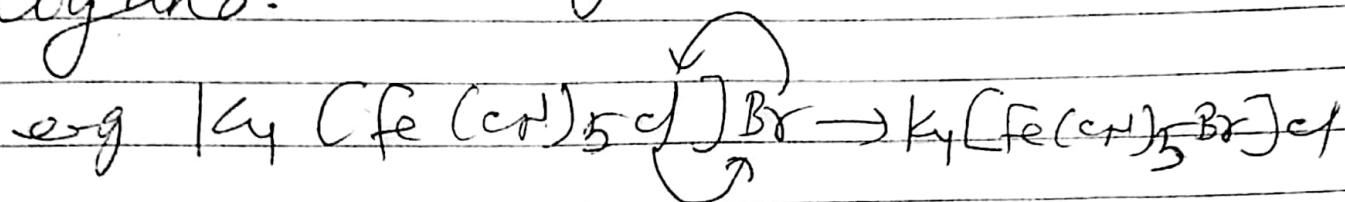
11.40-12.30, Marwan College

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# Isomerism :- when compound having same molecular formula and different structural formula due to different arrangement and form of ligand.



# Types of isomerism :-

- (1) Structural isomerism;
- (2) Stereo isomerism

# Types of structural isomerism.

- (1) linkage isomerism
- (2) ionization isomerism
- (3) Co-ordination isomerism
- (4) hydrated isomerism

# Types of stereo isomerism.

- (1) Cis.
- (2) Trans
- (3) Facial (Face)
- (4) Meridional (Mer)
- (5) optical isomerism. (Enantiomer  
diastereomer)

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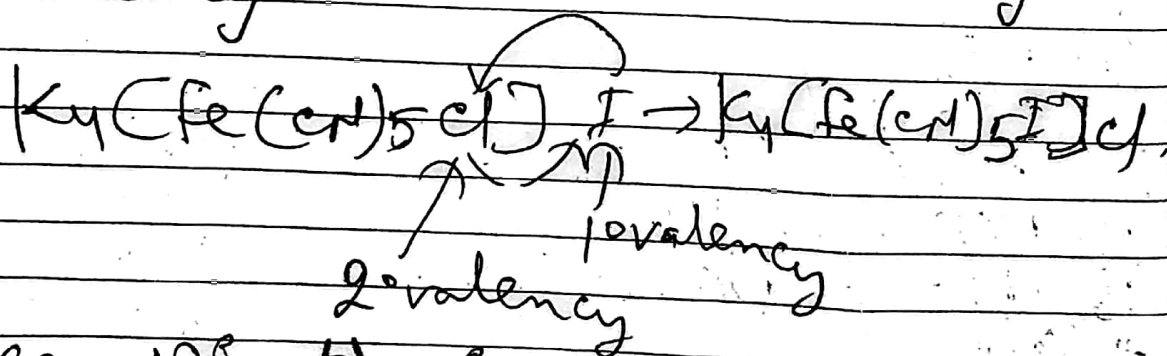
eg  $K_4[Fe(CN)_6] \rightarrow K_4[Fe(NC)_6]$   
cyanide isocyanide

eg  $K_4[Ni(MO_2)_6] \rightarrow K_4[Ni(O_2O)_6]$   
 N-nitro O-nitro

eg  $K_4[Ni(SCN)_6] \rightarrow K_4Co(SCN)_6$ .

thiocyano                      thiocyanato

2) Ionization isomerism:- when compd. having same molecular formula but different structural formula due to ~~diff~~ exchange of primary valency (ligand present outside big bracket) and secondary valency.



3- Co-ordination isomerism:- when two complex compd. having exchange ligand than called co-ordination isomerism.