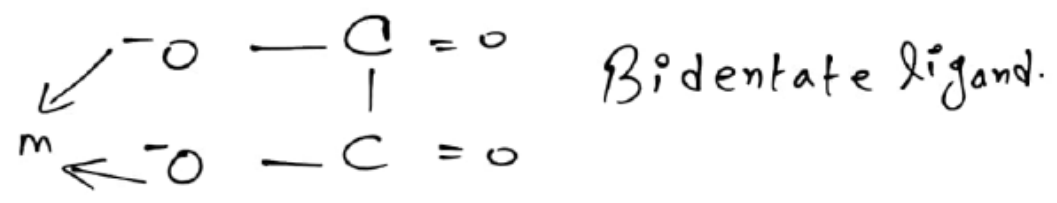
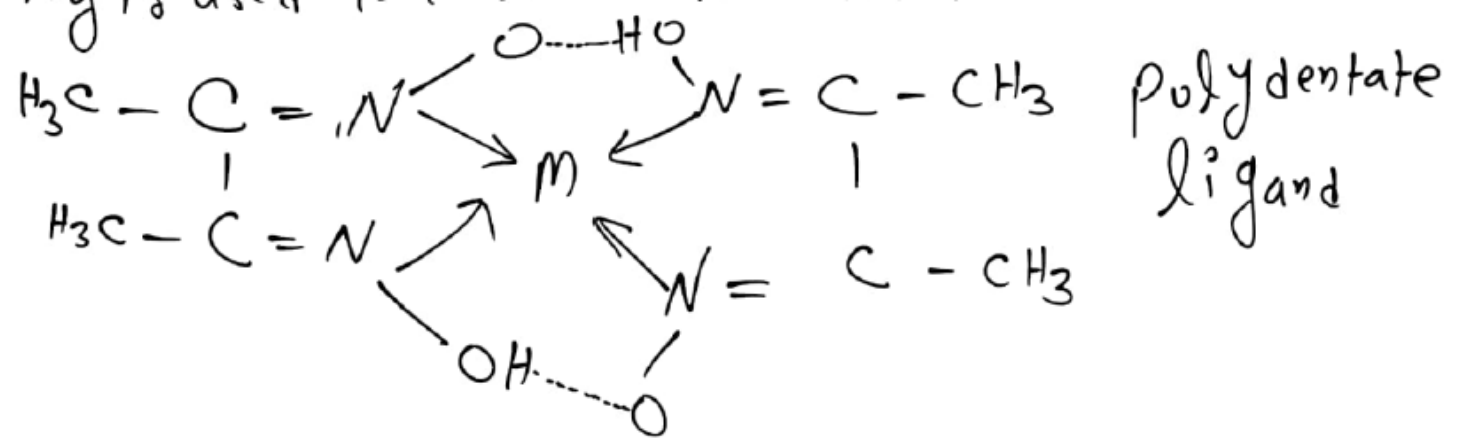


$C_2O_4^{2-}$ (oxalato)

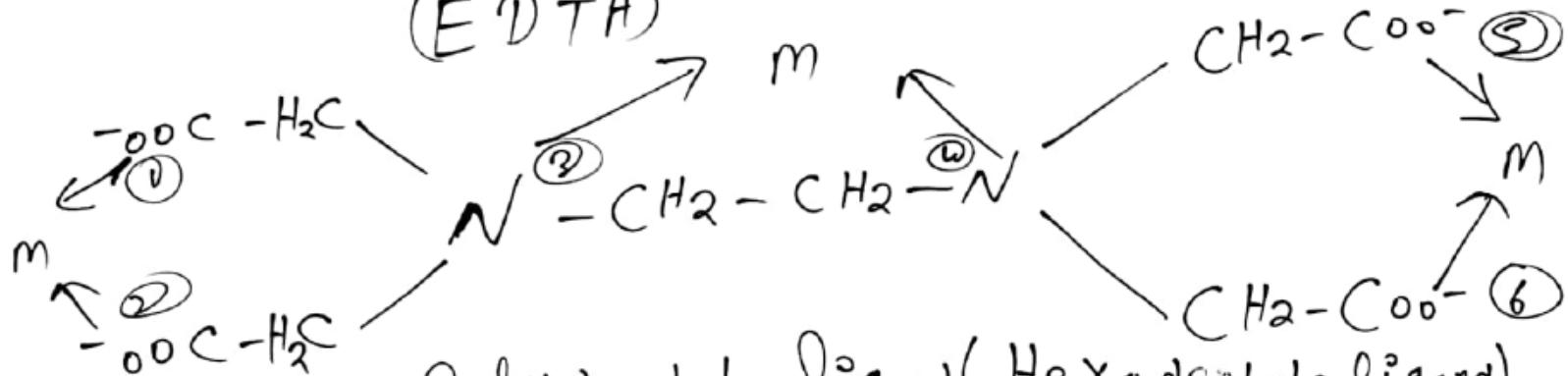


Dimethyl glyoxinato (dmg) =

dmg is used to test in Ni^{2+} ion in basic medium.



Ethylene diamine tetraacetate ÷
(EDTA)



polydentate ligand (Hexadentate ligand)

- # EDTA Combine with d-block metal ion in the ratio 1:1.
- # EDTA Combined with Ca & mg So it can be used to estimate hardness in water.
- # mg-EDTA is more stable than Ca-EDTA complex b/z of high polarisability, due to small size.

#1 To a person who is suffering from Pb poisoning
1 Ca-EDTA injection can be given b/c Pb-EDTA
is more stable than Ca-EDTA.

(3) Cationic Ligand:

(1) NO^+ \Rightarrow Nitrosonium

(2) $\text{NH}_2\text{-NH}_3^+$ \Rightarrow Hydrazinium

(3) NO_2^+ \Rightarrow Nitronium.

(4) on the basis of denticity ÷

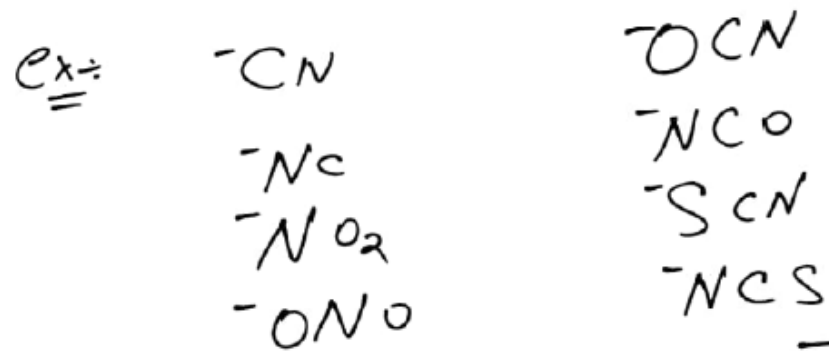
(1) monodentate ligand ÷ Ligand which can donate one l.p.

Ex ÷ OH^- , F^- , I^- , CH_3O^-
(methyl oxido)

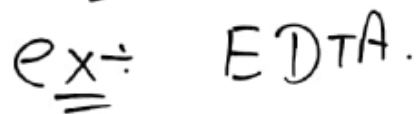
(2) polydentate ligand ÷ Ligand which can donate more than one l.p. (more than one donor atom.)

Ex ÷ oxalato, dmg, EDTA. etc.

(3) Ambidentate ligand ÷ ligands which have more than one donor atom. but these are not simultaneously functional.



(4) Flexidentate ligand ÷ The ligand show variation in denticity.



Nomenclature of Co-ordination Compound

- (1) Name of Cation is written before anion.
- (2) Name of ligands.
- (3) Prefix di, tri, tetra etc. used to indicate no. of individual ligand.
- (4) When a name ligand include prefix then the terms, bis, tris, tetrakis ... etc. are used.

(5) Name of Central metal atom/Ion.

metal

If complex is
Cation or neutral

If complex is
anion.

Cr

Chromium

Chromate

Mn

manganese

manganate

Fe

Iron

Ferrate

Co

Cobalt

Cobaltate

Ni

Nickel

Nickelate

Cu

Copper

Cuprate

Zn

Zinc

Zincate

B

Boron

Borate

Al

Aluminium

Aluminate.

(5) Name of Central metal atom/ion.

metal

If Complex is
Cation or neutral

If Complex is
anion.

Pd

Palladium

Palladate

Pt

Platinum

platinate

Ag

Silver

Argentate

Au

gold

Aurate

Hg

mercury

mercurate

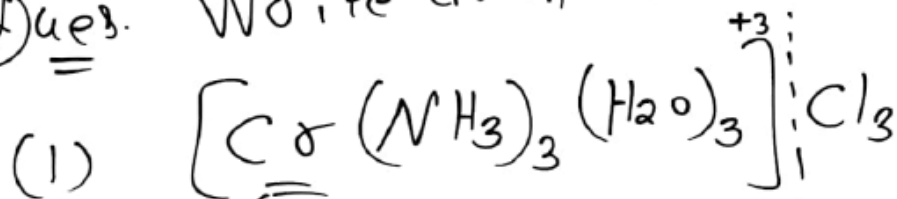
Ti

Titanium

Titanate.

(6) Oxidation no. of metal is written just after the naming of Central atom/ion in roman Parenthesis

Ques. Write down I.U.P.A.C Name of the following Compound.



$$\rightarrow X + 3(0) + 3(0) = +3$$

$$X = +3$$

ammine
↑
✓

aqua
↑

Triammine triaqua Chromium(III) Chloride