Date M/T/W/T/F/S/S

TDC Part III Students

* Concept of metal type A & metal type B

~~Ahrl~~ Ahrland, Chatt & Davies in 1958 classified the metals ions as type A and type B based upon their preferential bonding with a given ligand & the stability of this complexes.

Type A metal ions include the ions of Li^+ to Cs^+ i.e of group I, ~~one~~, ions of group II i.e Be^{2+} to Ba^{2+} and some of the lighter transition metals in higher oxidⁿ. States i.e Fe^{3+}, Co^{3+} etc. Type B metal ~~catio~~ ions are those of heavier transition metals in lower oxidⁿ. State such as Cu^+, ~~Ni~~ Ni^{2+}, Ag^+ etc.

Certain ligands tend to form stable complexes with type A metal ions & others form stable complexes with type B metal ions

Important Notes: For Ex. halides form complexes with type A metals in the sequence of

$$F^- > Cl^- > Br^- > I^-$$

This tendency to form complexes with type

M/T/W/T/F/S/S

Date ~~B metalion~~ is ~~p~~ in thy reverse ~~sq~~ sequence.

this led to classification of ligands type A ~~and type B~~ (~~@~~ ex. F^-) & type B (I^-)

Important Notes: