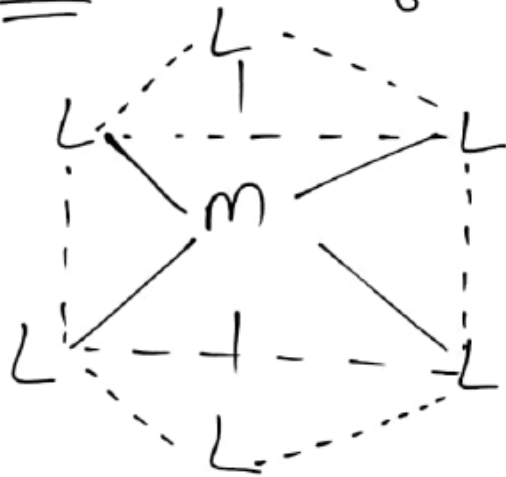
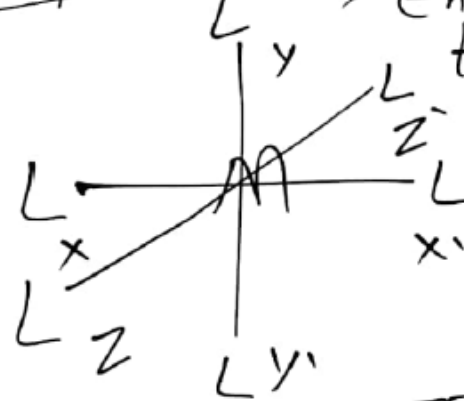


Case - I  $\div$

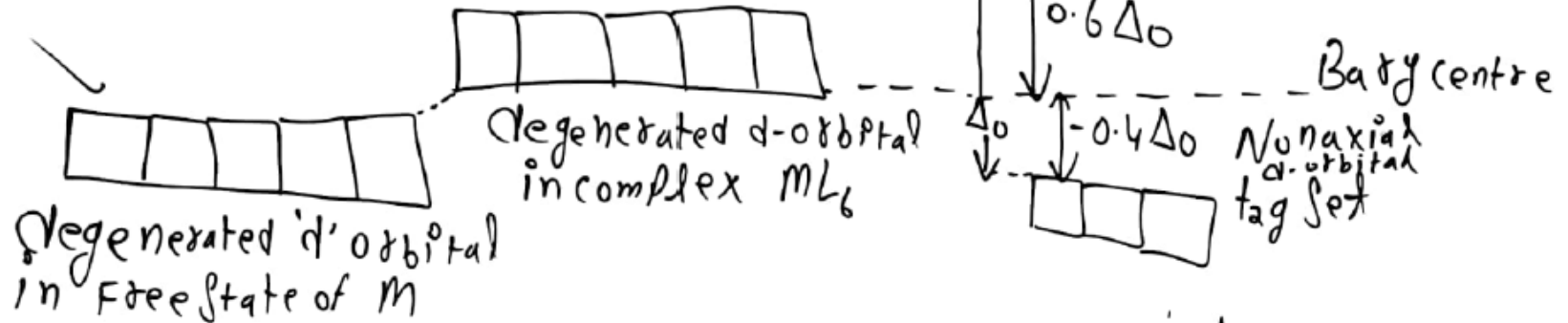
$ML_6$



$\Delta_o \Rightarrow$  Crystal field splitting energy (C.F.S.E.)  
 Energy difference b/w t<sub>2g</sub> set & e<sub>g</sub> set.

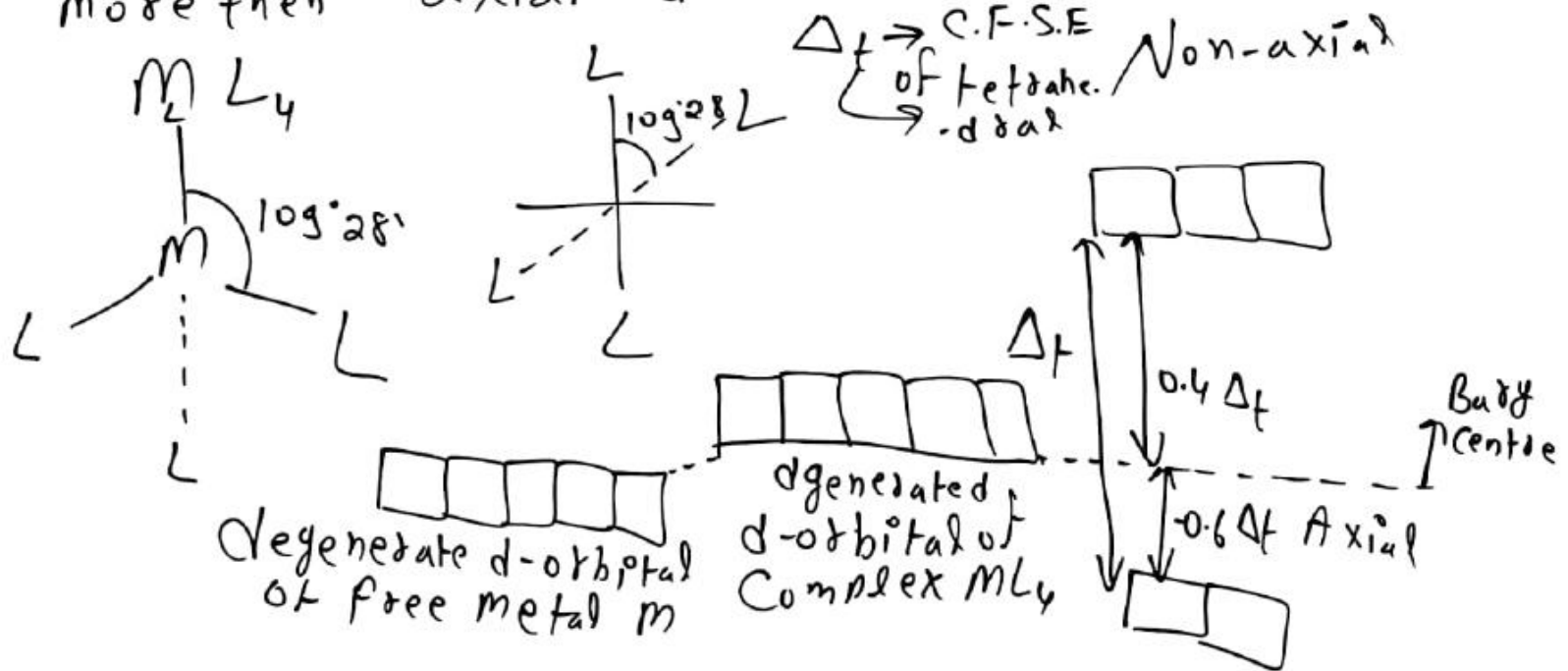


Axial d-orbital



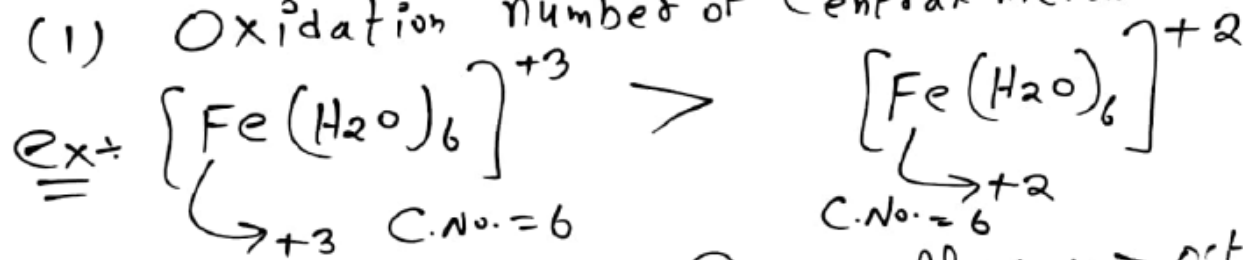
Case II Attack in tetrahedral field:

During the formation of tetrahedral complex the energy of non-axial d-orbital increases more than axial d-orbital.



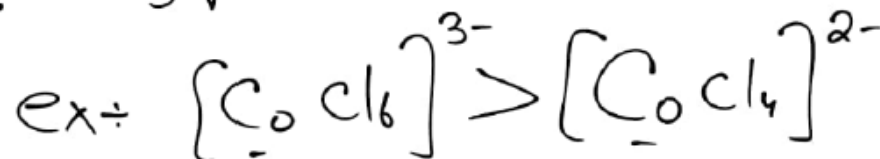
Factors affecting C.F.S.E

(1) Oxidation number of Central metal



(2) Geometry

Square Planar > octahedral > tetrahedral.



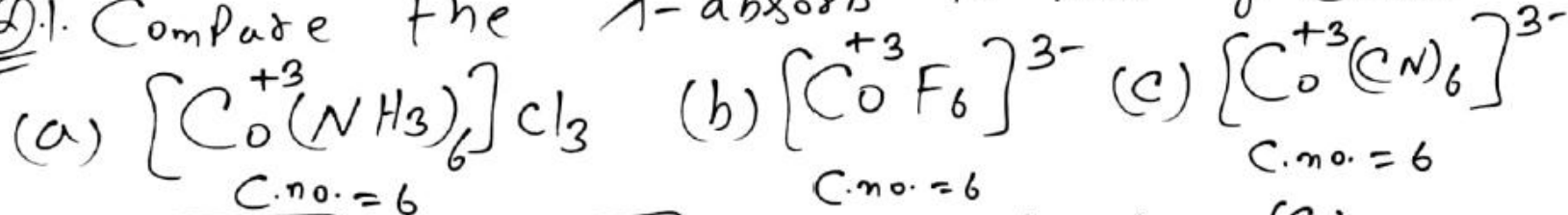
C.No. = 6  
Geomet. = octahedral

C.No. = 4  
tetrahedral.



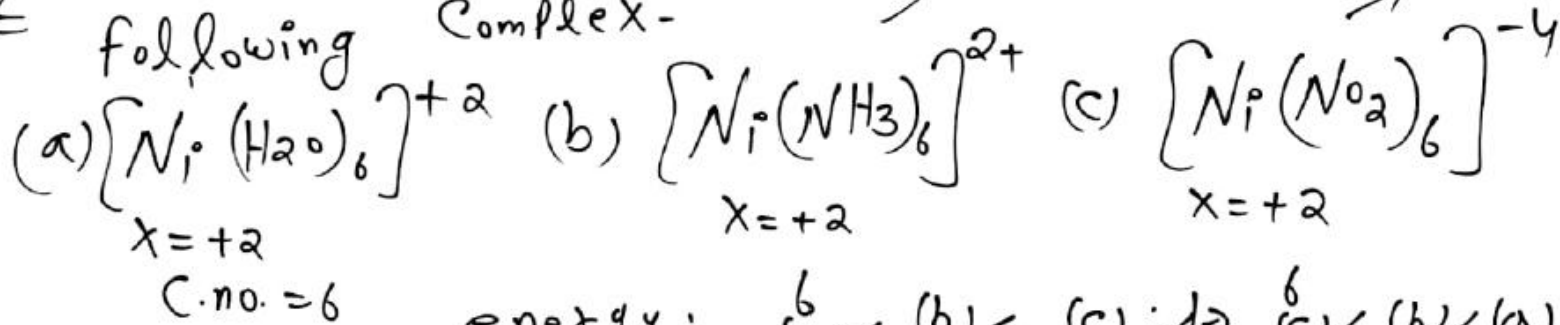


Q.1. Compare the  $\lambda$ -absorb in following. Complex-



$E = \frac{hc}{\lambda} \Rightarrow E \propto \frac{1}{\lambda}$  energy  $\div$  (b) < (a) < (c)  
 $\lambda \rightarrow \div$  (c) < (a) < (b)

Q.2. Correct order of  $\lambda$  absorbed in visible region of following Complex-



energy: (a) < (b) < (c);  $\lambda \Rightarrow$  (c) < (b) < (a)