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**CHEMISTRY**

**1. The possible isomers of an octahedral complex [Co(C2O4)(NH3)2]-**

**2. The diamagnetic species is**

**a. [CoF6]2- b. [Ni(CN)4]2- c.[NiCl4]2- d. None of these**

**3. The number of unpaired electrons is [Ni(CO)4] is**

**4. Find the nomenclature of the compound**

**a. [Al(H2O)6]Br3 b. [Cr(NH3)6]Cl3**

**c. K3[FeF6] d. [Zn(OH)4]**

**e. [Co(H2O)4Cl2]Cl e. [Cu(NH3)4]+2**

**5. Find the structure of the compound**

**a. Hexaamminecobalt(III)chloride b.Diamminetetrabromoplatinum(VI)bromide**

**c. Tetraaquacadmium(II)nitrate**

**d. Diamminesilver(I)ion**

**6. Give the octahedral splitting of d7 configuration of weak field ligand**

**7. Why tetrahedral geometry does not show geometrical isomerism?**

**8. What is de-generate orbitals?**

**9. Prove the spin only magnetic moment of [MnBr]2- is 5.9 BM. Predict its geometry.**

**10. Account for the following:**

**a) [Fe(CN)6]3- is weakly paramagnetic while [Fe(CN)6]4- is diamagnetic.**

**b) [Ni(CO)4] is tetrahedral while [Ni(CN)4]2- is square planar.**

**c) [Ti(H2O)6]3+ is coloured while [Sc(H2O)6]3+ is colourless**