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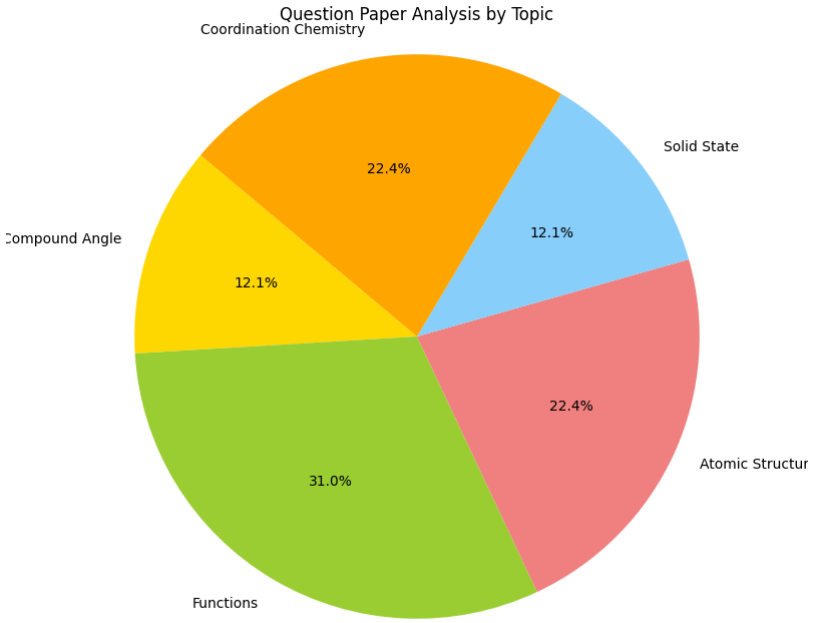
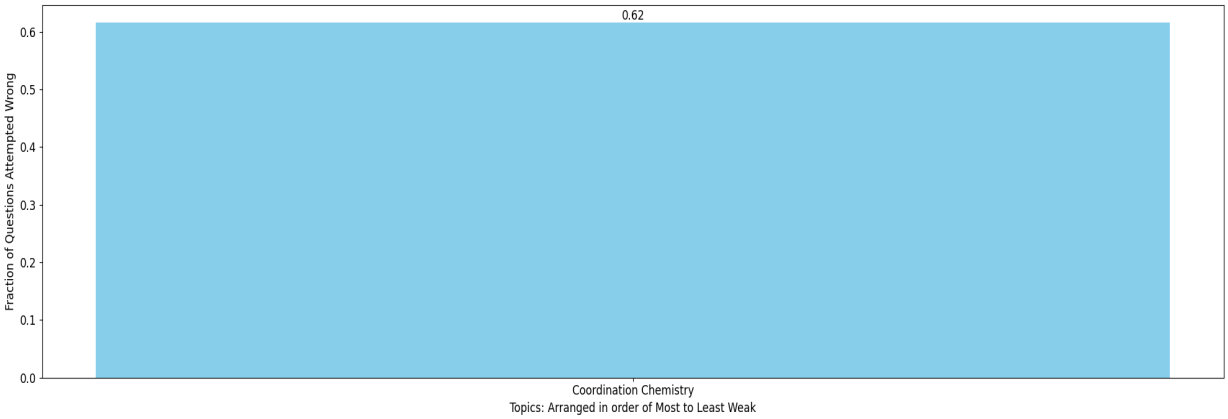
Question Paper Analysis:



Weak Topic Analysis:



Practice Questions:

Coordination Chemistry:

87. Among the following, the compound that is both paramagnetic and coloured is
(A) $K_2Cr_2O_7$ (B) $(NH_4)_2[TiCl_6]$ (C) $VOSO_4$ (D) $K_3[Cu(CN)_4]$

3. Which of the following compound(s) show(s) optical isomerism.
(A) $[Pt(bn)_2]^{2+}$ (B) $[CrCl_2(en)_2]^+$ (C) $[Co(en)_3][CoF_6]$ (D) $[Zn(gly)_2]$

76. An ion M^{2+}, forms the complexes $[M(H_2O)_6]^{2+}$, $[M(en)_3]^{2+}$ and $[MBr_6]^{4-}$, match the complex with the appropriate colour.
(A) Green, blue and red (B) Blue, red and green
(C) Green, red and blue (D) Red, blue and green

97. Coordination compounds have great importance in biological systems. In this context which of the following statements is incorrect ?
(A) Chlorophyll is a green pigment in plants and contains calcium
(B) Haemoglobin is the red pigment of blood and contains iron
(C) Cyanocobalamin is B_{12} and contains cobalt
(D) Carboxypeptidase A is an enzyme and contains zinc

5. Number of ambidentate ligands in a representative metal complex $[M(en)(SCN)_4]$ is _____. [en = ethylenediamine] **[JEE MAIN 2023]**

ıns. (4)

EXERCISE : JEE-ADVANCED

. The complex ion which has no 'd' electrons in the central metal atom is : **[JEE 2001]**

[Atomic number Cr = 24, Mn = 25, Fe = 26, Co = 27]

(A) $[MnO_4]^-$ (B) $[Co(NH_3)_6]^{3+}$ (4) $[Fe(CN)_6]^{3-}$ (D) $[Cr(H_2O)_6]^{3+}$

. The correct order of hybridisation of the central atom in the following species. **[JEE 2001]**

NH_3, $[PtCl_4]^{2-}$, PCl_5 and BCl_3 is [At No. Pt = 78]

(A) dsp^2,sp^3d,sp^2 and sp^3 (B) sp^3,dsp^2, sp^3d, sp^2

(C) dsp^2,sp^2,sp^3 and sp^3d (D) dsp^2, sp^3,sp^2 and sp^3d

. The species having tetrahedral shape is : **[JEE 2004]**

(A) $[PdCl_4]^{2-}$ (B) $[Ni(CN)_4]^{2-}$ (C) $[Pd(CN)_4]^{2-}$ (D) $[NiCl_4]^{2-}$

. The pair of compounds having metals in their highest oxidation state is **[JEE 2004]**

(A) MnO_2, $FeCl_3$ (B) $[MnO_4]^-$, CrO_2Cl_2

(C) $[Fe(CN)_6]^{3-}$, $[Co(CN)_6]^{-3}$ (D)$[NiCl_4]^{2-}$, $[CoCl_4]^-$

. Spin only magnetic moment of the compound $Hg^{+2}[Co(SCN_4)]$ is **[JEE 2004]**

(A) $\sqrt{3}$ (B) $\sqrt{15}$ (C) $\sqrt{24}$ (D) $\sqrt{8}$