

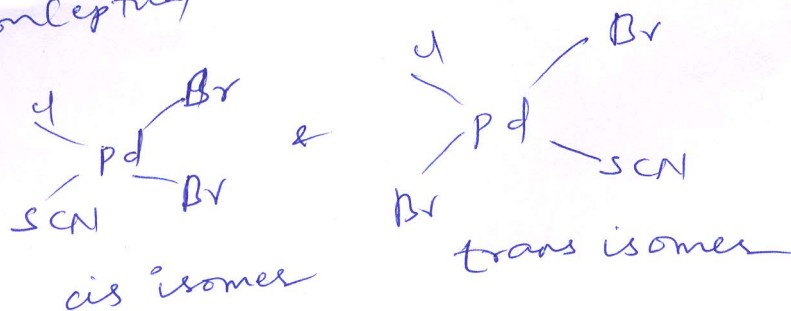
(13) Factual

(2)

(14) Factual

(15) Conceptual

(16)

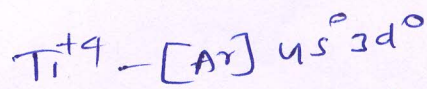
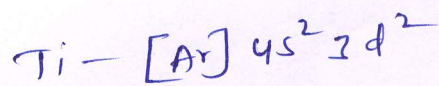


(17) chelating ligands form more stable complexes than monodentate ligands

(18) criteria for optical activity is absence of plane of symmetry

(19) In $[Ti(H_2O)_6]Cl_4$

O.S of Ti is +4



no unpaired electrons
 \therefore zero magnetic moment

(20) Electrical conductivity depends on no. of ions and the order is $III > IV > I$

(21) I. $Fe^{+2} - 3d^6 - t_{2g}^6 e_g^0$ - no unpaired e^-

II. $Fe^{+3} - 3d^5 - t_{2g}^5 e_g^0$ - 1 unpaired e^-

III. $Cr^{+3} - 3d^3 - t_{2g}^3 e_g^0$ - 3 unpaired e^- 's

IV. $Ni^{+2} - 3d^8 - t_{2g}^6 e_g^2$ - 2 unpaired e^- 's

magnetic moment order: $III > IV > II > I$

(22)

(22) Conceptual

(23)

(c) 1 mole of $K_4[Fe(CN)_6]$ gives 3 moles of N_2 gas
0.12 moles of N_2 gas
 $\frac{0.12 \times 7}{3} = 4 \times 10^{-2}$

