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**Max Time : 1 hr** **Class = 12th Chemistry Test Max Marks : 20**

**Isomerism + KMnO4 + Cr2**

1. Orange colour of Cr2 ion changes to yellow when treated with an alkali. Why? [ 1 ]
2. What type of isomerism is shown by complex [Co(en)3 ]Cl3 ? [ 1 ]
3. Draw one of the geometrical isomers of the complex [Pt (en)2 Cl­2]2+ which is optically active

[ 1 ]

1. Complete the following equation : [ 1 ]

+ 6 H+ +

1. Draw the geometrical isomers of the complex [Pt (NH3)2 Cl­2]. [ 1 ]
2. Complete the following equations : [ 2 ]

a) + 16 H+ + 5 S2 –

b) KMnO4

1. Complete the following equations : [ 2 ]

a) 2 MnO­2 + 4 KOH + O2

b) Cr2 + 14 H+ + 6 I –

1. Write IUPAC name of the complex [Cr(NH3)4 Cl­2] +. Draw structures of geometrical isomers of this complex. [ 2 ]
2. How do you prepare : [ 3 ]

a) K2MnO4 from MnO2 b) Na2Cr2O7 from Na2CrO4

1. Complete the following equations : [ 3 ]

a) Cr2 + 14 H+ + 6 Fe2+

b) 2 Cr + 2 H+

c) + 16 H+ + 5 C2­

1. Write the type of isomerism exhibited by the complexes: [ 3 ]

a) [Co(NH3)5 Cl­] SO4 b) [Co(en)3 ]3+ c) [Co(NH3)6] [Cr (CN)6]