



## IUPAC Nomenclature of Coordination Complexes

(01) Write the IUPAC names of the following compounds.

- i.  $\text{Mg}_3\text{N}_2$  - .....
- ii.  $\text{FeCl}_3$  - .....
- iii.  $\text{Na}_2\text{Cr}_2\text{O}_7$  - .....
- iv.  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$  - .....
- v.  $\text{Ni}(\text{MnO}_4)_2$  - .....

(02) Write the IUPAC names of the following ions.

- i.  $[\text{CuCl}_4]^{2-}$  - .....
- ii.  $[\text{CoCl}_4]^{2-}$  - .....
- iii.  $[\text{Fe}(\text{CN})_6]^{4-}$  - .....
- iv.  $[\text{Co}(\text{CN})_6]^{3-}$  - .....
- v.  $[\text{Fe}(\text{CN})_6]^{3-}$  - .....
- vi.  $[\text{Ag}(\text{CN})_2]^-$  - .....
- vii.  $[\text{Cr}(\text{Br})_6]^{3-}$  - .....
- viii.  $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$  - .....
- ix.  $[\text{Cr}(\text{H}_2\text{O})_6]^{3+}$  - .....
- x.  $[\text{Cr}(\text{H}_2\text{O})_2(\text{NH}_3)_4]^{3+}$  - .....
- xi.  $[\text{Co}(\text{OH})(\text{NH}_3)_4(\text{H}_2\text{O})]^{2+}$  - .....
- xii.  $[\text{Co}(\text{CN})_2(\text{NH}_3)_4]^+$  - .....
- xiii.  $[\text{Fe}(\text{CN})_2(\text{NH}_3)_4]^+$  - .....
- xiv.  $[\text{Fe}(\text{CN})_5\text{NO}]^{3-}$  - .....
- xv.  $[\text{CoCl}(\text{NH}_3)_5]^{2+}$  - .....

(03) Write the IUPAC names of the following coordination complexes.

- i.  $K_4[Fe(CN)_6]$  - .....
- ii.  $K_3[Fe(CN)_5(NO)]$  - .....
- iii.  $Na_2[ZnCl_4]$  - .....
- iv.  $[Fe(SCN)_2]_2S$  - .....
- v.  $[CrCl_2(H_2O)_4]_2CrO_4$  - .....
- vi.  $[Ag(NH_3)_2]Cl$  - .....
- vii.  $[Fe(OH)_2(H_2O)_4]Br$  - .....
- viii.  $[CoCl(NH_3)_5](NO_3)_2$  - .....
- ix.  $[CoCl(NH_3)_5](NO_2)_2$  - .....
- x.  $K_2[CuCl_4]$  - .....
- xi.  $[Cr(NH_3)_6][Fe(CN)_6]$  - .....
- xii.  $[Co(SO_4)(NH_3)_4]NO_3^-$  - .....
- xiii.  $Al[Ag(CN)_2]_3$  - .....
- xiv.  $[Al(CN)_2]_2[CuF_4]$  - .....
- xv.  $[Fe(SCN)][CuCl_4]$  - .....

(04) Write the chemical formulae of the following complexes.

- i. Ammonium hexacyanoferrate (III) - .....
- ii. Tetraamminecopper (II) bromide - .....
- iii. Potassium hexacyanoferrate (III) - .....
- iv. Hexaamminecobalt(IV) tetrachlorocuprate(II) - .....
- v. Iron (III) hexacyanoferrate (II) - .....
- vi. Tetraaquadichlorochromium (III) dichromate - .....
- vii. Dithiocyanatoiron (III) manganate - .....
- viii. Hexaaquanickel (II) tetrachlorocobaltate (II) - .....
- ix. Diamminebromidodicarbonylhydridocobalt(III) chloride - .....
- x. Pentaamminehydroxocobalt(III) nitrate - .....