

# Atomic Energy Central School, Indore

## Class XII Chemistry CO-ORDINATION COMPOUNDS

Worksheet 2/6

### Questions

1. Using IUPAC norms write the systematic names of the following:

- (i)  $[\text{Zn}(\text{OH})_4]^{2-}$  (ii)  $\text{K}_2[\text{PdCl}_4]$  (iii)  $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$  (iv)  $\text{K}_2[\text{Ni}(\text{CN})_4]$  (v)  $[\text{Co}(\text{NH}_3)_5(\text{ONO})]^{2+}$   
(vi)  $[\text{Co}(\text{NH}_3)_6]_2(\text{SO}_4)_3$  (vii)  $\text{K}_3[\text{Cr}(\text{C}_2\text{O}_4)_3]$  (viii)  $[\text{Pt}(\text{NH}_3)_6]^{4+}$  (ix)  $[\text{CuBr}_4]^{2-}$  (x)  $[\text{Co}(\text{NH}_3)_5(\text{NO}_2)]^{2+}$

2. Write the formulas for the following coordination compounds:

- (i) Tetraammineaquacobalt(III) chloride  
(ii) Potassium tetracyanonickelate(II)  
(iii) Tris(ethane-1,2-diamine) chromium(III) chloride  
(iv) Amminebromidochloridonitrito-N-platinate(II)  
(v) Dichloridobis(ethane-1,2-diamine)platinum(IV) nitrate  
(vi) Iron(III) hexacyanoferrate(II)  
(vii) Hexaaquamanganese(II) sulphate  
(viii) Pentaamminechloridocobalt(III) chloride  
(ix) Potassium hexacyanoferrate(III)  
(x) Sodium trioxalatoferrate(III)  
(xi) Potassium tetrachloridopalladate(II)  
(xii) Diamminechlorido(methanamine)platinum(II) chloride

### Answers

1.

- (i) Tetrahydroxozincate(II) (vi) Hexaamminecobalt(III) sulphate  
(ii) Potassium tetrachloridopalladate(II) (vii) Potassium tri(oxalato)chromate(III)  
(iii) Diamminedichloridoplatinum(II) (viii) Hexaammineplatinum(IV)  
(iv) Potassium tetracyanonickelate(II) (ix) Tetrabromidocuprate(II)  
(v) Pentaamminenitrito-O-cobalt(III) (x) Pentaamminenitrito-N-cobalt(III)

2.

- (i)  $[\text{Co}(\text{NH}_3)_4(\text{H}_2\text{O})_2]\text{Cl}_3$  (vii)  $[\text{Mn}(\text{H}_2\text{O})_6]\text{SO}_4$   
(ii)  $\text{K}_2[\text{Ni}(\text{CN})_4]$  (viii)  $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{Cl}_2$   
(iii)  $[\text{Cr}(\text{en})_3]\text{Cl}_3$  (ix)  $\text{K}_3[\text{Fe}(\text{CN})_6]$   
(iv)  $[\text{Pt}(\text{NH}_3)\text{BrCl}(\text{NO}_2)]^-$  (x)  $\text{Na}_3[\text{Fe}(\text{C}_2\text{O}_4)_3]$   
(v)  $[\text{PtCl}_2(\text{en})_2](\text{NO}_3)_2$  (xi)  $\text{K}_2[\text{PdCl}_4]$   
(vi)  $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$  (xii)  $[\text{Pt}(\text{NH}_3)_2\text{Cl}(\text{NH}_2\text{CH}_3)]\text{Cl}$