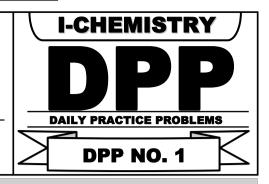
TARGET: NEET (UG) 2024

Course: SARANSH (Youtube Live CRASH COURSE)



InOrganic Chemistry: Coordination Compound

DPP No.: 1

- 1. Homoleptic complex from the following complexes is:
 - (1) Damminechloridonitrito N platinum (II)
 - (2) Pentaamminecarbonatocabalt (III) choride
 - (3) Trimminetriaquachromium (III) choride
 - (4) Potassium trioxalatoaluminate (III)
- 2. Which of the following forms a set of a complex and a double salt, respectively?
 - (1) CuSO₄.5H₂O and CuCl₂.4NH₃
 - (2) PtCl₂.2NH₃ and PtCl₄.2HCl
 - (3) K₂PtCl₂.2NH₃ and KAI(SO₄)₂.12H₂O
 - (4) NiCl₂.6H₂O and NiCl₂(H₂O)₄
- **3.** Which complex compound is most stable?
 - (1) $[Co(NH_3)_3(NO_3)_3]$

(2) $\left[CoCl_2(en)_2 \right] NO_3$

(3) $[Co(NH_3)_6]_2(SO_4)_3$

- (4) $[Co(NH_3)_4(H_2O)Br](NO_3)_2$
- **4.** The IUPAC name of the complex -

[Ag(H₂O)₂][Ag(CN)₂] is:

- (1) dicyanidosilver(I) diaquaargentate(I)
- (2) diaguasilver(I) dicyanidoargentate(I)
- (3) dicyanidosilver(II) diaquaargentate(II)
- (4) diaquasilver(II) dicyanidoargentate(II)
- 5. An excess of AgNO₃ is added to 100 mL of a 0.01M solution of dichlorotetraaquachromium (III) chloride. The number of moles of AgCI precipitated would be:
 - (1) 0.002
- (2) 0.003
- (3) 0.01
- (4) 0.001
- 6. Cobalt (III) chloride forms several octahedral complexes with ammonia. Which of the following will not give test for chloride ions with silver nitrate at 25°C?
 - (1) CoCl₃·4NH₃
- (2) CoCl₃·5NH₃
- (3) CoCl₃·6NH₃
- (4) CoCl₃·3NH₃



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- 7. The correct of order the stoichiometries of AgCl formed when AgNO3 in excess is treated with the complexes CoCl₃.6NH₃, CoCl₃. 5NH₃, CoCl₃. 4NH₃ respectively is :
 - (1) 1 AgCl, 3AgCl, 2AgCl

(2) 3AgCl, 1 AgCl, 2AgCl

(3) 3AgCl, 2AgCl, 1 AgCl

(4) 2 AgCl, 3 AgCl, 1 AgCl

- 8. Urea reacts with water to form A which will decompose to form B, B when passed through Cu²⁺(aq.) deep blue colour solution C is formed. What is the formula of C from the following?
 - (1) [Cu(NH₃)₄]²⁺
- (2) Cu(OH)2
- (3) CuCO₃.Cu(OH)₂
- (4) CuSO₄
- 9. Which one of the following is an outer orbital complex and exhibits paramagnetic behaviour?
 - (1) $[Ni(NH_3)_6]^{2+}$
- (2) $[Zn(NH_3)_6]^{2+}$
- (3) $[Cr(NH_3)_6]^{3+}$
- $(4) [CO(NH_3)_6]^{3+}$
- 10. Low spin complex of d⁶-cation in an octahedral field will have the following energy:

 - (1) $\frac{-12}{5}\Delta_0 + P$ (2) $\frac{-12}{5}\Delta_0 + 3P$ (3) $\frac{-2}{5}\Delta_0 + 2P$ (4) $\frac{-2}{5}\Delta_0 + P$

(Δ_0 = Crystal Field Splitting Energy in an octahedral field, P = Electron pairing energy)

Answer Key

- 1.
- (4)
- (3)

3.

- (2)
- (2)
- 5.
- (4) 6.
- 7. (3)

8. (1)

- 9.
- (1)
- 10.
- (2)

2.