

PART 1 - CHEMISTRY

Topic : Coordination compounds

SECTION-A : (Maximum Marks : 4)

- This section contains **ONE** question.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONLY ONE** of these four options is the correct answer.
- For each question, choose the option corresponding to the correct answer.
- Answer to each question will be evaluated according to the following marking scheme :
 Full Marks : +4 If **ONLY** the correct option is chosen;
 Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered);
 Negative Marks : -1 In all other cases.

1. Among the following options, select the option in which each complex in Set-I shows geometrical isomerism and the two complexes in Set-II are ionization isomers of each other.

[en = $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$]

[JEE Advanced 2024 Paper 1]

- (A) Set-I: $[\text{Ni}(\text{CO})_4]$ and $[\text{PdCl}_2(\text{PPh}_3)_2]$
 Set-II: $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{SO}_4$ and $[\text{Co}(\text{NH}_3)_5(\text{SO}_4)]\text{Cl}$
- (B) Set-I: $[\text{Co}(\text{en})(\text{NH}_3)_2\text{Cl}_2]$ and $[\text{PdCl}_2(\text{PPh}_3)_2]$
 Set-II: $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$ and $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$
- (C) Set-I: $[\text{Co}(\text{NH}_3)_3(\text{NO}_2)_3]$ and $[\text{Co}(\text{en})_2\text{Cl}_2]$
 Set-II: $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{SO}_4$ and $[\text{Co}(\text{NH}_3)_5(\text{SO}_4)]\text{Cl}$
- (D) Set-I: $[\text{Cr}(\text{NH}_3)_5\text{Cl}]\text{Cl}_2$ and $[\text{Co}(\text{en})(\text{NH}_3)_2\text{Cl}_2]$
 Set-II: $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$ and $[\text{Cr}(\text{H}_2\text{O})_5\text{Cl}]\text{Cl}_2 \cdot \text{H}_2\text{O}$

Scan or tap for the
full solution



Space for Rough Work

Test Pattern : JEE (Advanced)

SECTION-A

[illegible]