

## NEET COORDINATION COMPOUNDS — STRUCTURAL ISOMERISM IN COORDINATION COMPOUNDS — PYQS

Max. Marks: 16

Questions: 4

### Section A (MCQ) — 4 questions

**Q.1** Match List I with List II.

| List I<br>(Complex) |                                                      | List II<br>(Type of isomerism) |                        |
|---------------------|------------------------------------------------------|--------------------------------|------------------------|
| A.                  | $[\text{Co}(\text{NH}_3)_5(\text{NO}_2)]\text{Cl}_2$ | I.                             | Solvate isomerism      |
| B.                  | $[\text{Co}(\text{NH}_3)_5(\text{SO}_4)]\text{Br}$   | II.                            | Linkage isomerism      |
| C.                  | $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$ | III.                           | Ionization isomerism   |
| D.                  | $[\text{Co}(\text{H}_2\text{O})_6]\text{Cl}_3$       | IV.                            | Coordination isomerism |

Choose the correct answer from the options given below:

[NEET (UG) 2024]

- (1) A-II, B-III, C-IV, D-I (2) A-I, B-III, C-IV, D-II  
 (3) A-I, B-IV, C-III, D-II (4) A-II, B-IV, C-III, D-I

Scan or tap for the full solution


**Q.2** Match List-I with List-II :

| List-I<br>(Complexes) |                                                                                                                                     | List-II<br>(Types) |                        |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------|
| a.                    | $[\text{Co}(\text{NH}_3)_5\text{NO}_2]\text{Cl}_2$ and $[\text{Co}(\text{NH}_3)_5\text{ONO}]\text{Cl}_2$                            | i.                 | ionisation isomerism   |
| b.                    | $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$ and $[\text{Cr}(\text{CN})_6][\text{Co}(\text{NH}_3)_6]$                       | ii.                | coordination isomerism |
| c.                    | $[\text{Co}(\text{NH}_3)_5(\text{SO}_4)]\text{Br}$ and $[\text{Co}(\text{NH}_3)_5\text{Br}]\text{SO}_4$                             | iii.               | linkage isomerism      |
| d.                    | $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$ and $[\text{Cr}(\text{H}_2\text{O})_5\text{Cl}]\text{Cl}_2 \cdot \text{H}_2\text{O}$ | iv.                | solvate isomerism      |

Choose the correct answer from the options given below :

[NEET (UG) 2022 (Phase 2)]

- (1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)  
 (2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)  
 (3) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)  
 (4) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

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**Q.3** The complexes  $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$  and  $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$  are the examples of which type of isomerism?

[AIPMT 2011 (Prelims)]

- (1) Linkage isomerism  
 (2) Ionization isomerism  
 (3) Coordination isomerism  
 (4) Geometrical isomerism

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**Q.4**  $[\text{Co}(\text{NH}_3)_4(\text{NO}_2)_2]\text{Cl}$  exhibits

[AIPMT 2006]

- (1) linkage isomerism, geometrical isomerism and optical isomerism  
 (2) linkage isomerism, ionization isomerism and optical isomerism  
 (3) linkage isomerism, ionization isomerism and geometrical isomerism  
 (4) ionization isomerism, geometrical isomerism and optical isomerism.

Scan or tap for the full solution



### ANSWER KEY

| Ques. | 1 | 2 | 3 | 4 |  |  |  |  |  |  |
|-------|---|---|---|---|--|--|--|--|--|--|
| Ans.  | 1 | 4 | 3 | 3 |  |  |  |  |  |  |