



I. Answer any 3 of the following questions:

[3 x 2 = 6]

1. Write the formula for the following coordination compounds potassiumhexacyanidoferrate(II).
2. What is linkage isomerism?
3. What is crystal field splitting energy?
4. What is crystal field stabilization energy (CFSE)?

II. Answer any 3 of the following questions:

[3 x 3 = 9]

5. $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$ is coloured, while $[\text{Sc}(\text{H}_2\text{O})_6]^{3+}$ is colourless explain.
6. Give an example of coordination compound used in medicine and two examples of biologically important coordination compounds.
7. Write the formula for the following coordination compounds pentacarbonyliron(0)
8. Give one test to differentiate $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{SO}_4$ and $[\text{Co}(\text{NH}_3)_5\text{SO}_4]\text{Cl}$.

III. Answer any 2 of the following questions:

[2 x 5 = 10]

9. Write the postulates of Werner's theory.
10. Explain optical isomerism in coordination compounds with an example.
11. Give the difference between double salts and coordination compounds.

-----ALL THE BEST-----

- Test should be written under the supervision of your parents and get the answer paper signed from them.
- No corrections should be made after the test timings. We expect your honesty.
- Test Papers have to be submitted after the completion of all the 4 tests.
- Submission Date of Test Papers: 27th Aug - 30th Aug 2021. Timings: 9.30 AM - 1.00 PM / 5.00 PM - 8.00 PM