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BSCHE - MJ304

B.Sc. DEGREE EXAMINATION, NOV/DEC. - 2024

(THIRD SEMESTER)

CHEMISTRY

Inorganic and Physical chemistry (Major)

(w.e.f. 2023-24 Admitted Batch)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any five of the following

[5 × 5 = 25]

1. Explain structural isomerism in complexes.
2. Write about Labile and Inert complexes.
3. Explain chelate effect.
4. Give the classification of organo metallic compounds.
5. Write relation between heat capacities derive the relation between heat capacities.
6. Explain about Trans effect.
7. Write about third Law of Thermodynamics.
8. Write about Jahn - Teller distortion.

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[1]

[P.T.O.]



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SECTION - B

Answer all of the following :

[5 × 10 = 50]

9. a) Explain valence bond Theory.

OR

b) Explain crystal field Theory with examples.

10. a) Explain SN^1 and SN^2 substitution reactions in square planar complexes.

OR

b) Explain transition state, intermediate and activated complex with examples.

11. a) Explain Job's method.

OR

b) Explain factors affecting stability of complexes.

12. a) Explain methods of preparation of mono and binuclear carbonyls.

OR

b) Explain Joule Thomson effect and kirchoff's equation.

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13. a) Explain carnot cycle and its efficiency.

OR

b) Explain and derive Helmtoltz and Gibb's equation.



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