

SEMESTER	I	QP CODE	1912	REG NO.							
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P.R. GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA
PG ODD SEMESTER END EXAMINATIONS-JULY-2022

I M. Sc., : ORGANIC CHEMISTRY & ANALYTICAL CHEMISTRY

PAPER 2: INORGANIC CHEMISTRY

DATE	13.04.2023	SESSION	FN	MAX. MARKS	75	TIME	3 HRS
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SECTION -A (4×15=60)

Answer all the Questions Each Question Carries 15 Marks 4×15=60 marks

- A) Discuss the structures of trinuclear and hexanuclear metal clusters
(Or)
B) Explain the structure and bonding in $\text{Mo}_2\text{Cl}_8^{4-}$
- A) Write the preparation, structure and bonding in Ferrocene
(Or)
B) Explain the synthesis, structure and reactions of Dynitrogen complexes.
- A) Discuss inert and labile complexes
(Or)
B) Explain Pearson's concept of Hard and Soft acid and bases with suitable examples.
- A) Discuss the mechanism of acid and base hydrolysis of Co(III) Complex
(Or)
B) Discuss the mechanism of outer sphere electron transport reactions in octahedral complexes.

SECTION -A (5×3=15)

Write any FIVE questions each question carries 3 marks (5×3=15 marks)

- Polyatomic cluster
- Structure and magnetic properties of $\text{Re}_2(\text{RCOO})_4\text{X}_2$
- With suitable example explain 18 electron rule
- Iso electric relation ship
- Elaborate Chelate effect
- Inner sphere electron transfer Mechanism
- Trans effect
- Base hydrolysis of complexes