


DRAVIDIAN UNIVERSITY
Directorate of Distance Education (DDE)
KUPPAM – 517 426:: A.P.
Course: I year M.Sc. (Chemistry)
Paper – I: In-organic Chemistry
Question Paper for Assignment

Answer any **THREE** of the following **FIVE** Questions.

3x10=30

1. Write about the Splitting of d- orbitals in octahedral?
2. Explain Pearson's theory of hard and soft acids and bases?
3. Write a note on theories of "trans effect"?
4. Explain briefly about preparation, Structures of metal nitrosyls and its analytical uses?
5. Give a briefly account on the "Charge transfer Spectra"?


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Paper – II: Organic Chemistry
Question Paper for Assignment

Answer any **THREE** of the following **FIVE** Questions.

3x10=30

1. (a) Write about Huckel's rule?
(b) Explain the concept of Aromaticity?
2. What is Stereoisomerism? Explain briefly about the stereoisomerism in cycle compounds?
3. Explain the Generation, Structure and stability of carbanion?
4. What is SN 'Mechanism? Write the factors affecting the SN' Mechanism?
5. Write the Mechanisms for the following
 - (a) Claisen Reaction
 - (b) Dieckman Reaction

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Paper – III: Physical Chemistry

Question Paper for Assignment

Answer any **THREE** of the following **FIVE** Questions.

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1. Explain about eigen values and eigen functions?
2. Define and explain the following
 - (a) Internal Energy (b) Enthalpy (c) Entropy and (d) free energy
3. Write a note on 'Collision theory' of reaction rates?
4. Explain about the liquid function potentials?
5. Write about the Langmuir adsorption isotherms?


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Paper – IV: General Chemistry
Question Paper for Assignment

Answer any **THREE** of the following **FIVE** Questions.

3x10=30

1. (a) What is Standard deviation?
(b) Write about the minimization of errors?
2. Explain briefly about the Beer – Lamberts law?
3. (a) What is Stark effect
(b) Explain the factors affecting the band positions and intensities for IR regions?
4. What is FT- NMR? Write the advantages of FT – NMR?
5. (a) Write the Chemical Composition of atmosphere?
(b) What are the steps to control air pollution?