

Department of Chemistry
RAMASHRAY BALESHWAR COLLEGE, DALSINGSARAI, SAMASTIPUR
MJC-III-SEM-ASSIGNMENT-(2024-28)

Submission Date: 05.01.2026 to 07.01.2026

MJC-III-[Paper-3]/Organic Chemistry-Theory

Note: Attempt any three questions

Total Marks = 10 Marks

1. Write a short note on structure and reactivity of Carbenes?
2. Write short note on (a) Friedel Craft Alkylation with Mechanism (b) Mechanism of sulphonation in benzene
3. Define aromaticity and Huckel rule with examples.
4. Explains the differences between SN1 and SN2 reaction.
5. Write the mechanism of elimination-addition reaction or benzyne mechanism.

MJC-III-SEM-[Paper-4]/Physical Chemistry-Theory

Note: Attempt any three questions

Total Marks = 10 Marks

1. How many types of thermodynamic systems are present? Define.
2. Write down the objective of first, second and third law of thermodynamics.
3. What is the enthalpy of reaction? Derive the formula for standard enthalpy of formation.
4. Define all the four steps involved in Carnot Cycle.
5. Derive the equation for the effect of temperature on chemical potential.

[MJC-III-SEM-/Paper-4]/Physical Chemistry-Practical

Note: Attempt all the questions

Total Marks = 10 Marks

1. Determination of enthalpy of Neutralization of Hydrochloric acid with sodium hydroxide.
2. Determine the Solubility of Benzoic acid in water and determination of change in enthalpy (ΔH) for process.
3. Give the list of equipment used in physical experiment.

***Note: Practical assignment should be in chemistry practical file**

Dr. Apoorv Saraswat
Head, Department of Chemistry

Department of Chemistry
RAMASHRAY BALESHWAR COLLEGE, DALSINGSARAI, SAMASTIPUR
MIC-III-SEM-ASSIGNMENT-(2024-28)
MIC-Chemistry-Theory
Submission Date: 08.01.2026 to 10.01.2026

Note: Attempt any three questions

Total Marks = 10 Marks

1. Write a short note on free radical substitution reaction of alkenes.
2. Differentiate between Markovnikov's and anti-Markovnikov's addition reaction of alkene.
3. Explain the term (a) oxy-mercuration and de-mercuration (b) ozonolysis of alkane
4. Describe the preparation and properties of alkynes and explain its uses.
5. What are the main sources and causes of Air Pollution?

Dr. Apoorv Saraswat
Head, Department of Chemistry

Department of Chemistry
RAMASHRAY BALESHWAR COLLEGE, DALSINGSARAI, SAMASTIPUR
MDC-III-SEM-ASSIGNMENT-(2024-28)
MDC-Chemistry-Theory
Submission Date: 08.01.2026 to 10.01.2026

Note: Attempt any three question

Total Marks = 10 Marks

1. What are the main sources and causes of Water Pollution?
2. Write the definition and classifications of Polymers.
3. Write short note on (a) Bakelite (b) Neoprene.
4. Write short note on (a) Tyndal effect (b) Brownie movement
5. What is drug. Explain the difference of drugs and Medicine

MDC-III-SEM-ASSIGNMENT-(2024-28)
[MDC-III-SEM]-Chemistry Practical-(2024-28)

Note: Attempt all the questions

Total Marks = 10 Marks

1. Identify the acidic and basic radicals in given unknown inorganic mixture.
2. Give the list of equipment used in inorganic chemistry laboratory.

***Note: Practical assignment should be in chemistry practical file**

Dr. Apoorv Saraswat
Head, Department of Chemistry