

MSc I Semester

Paper No. – CH-3

Quantum Chemistry thermodynamics, and Chemical Dynamics

- Q1. Derive Schrodinger Equation for Particle in a Box? 10
- Q2. Write Basic Rules of Differentiation and Integration & its Application ? 10

MSc I Semester

Paper No. – CH-4

Theory & Applications of Spectroscopy

- Q1. Explain Interaction of Electromagnetic Radiation? 10
- Q2. Explain Classical and Quantum Theories of Raman Effect? 10

MSc I Semester

Paper No. – CH-1

Group Theory & Chemistry Of Metal Complexes

- Q1. Explain Molecular Orbital Theory for Octahedral, tetrahedral & Square Planar Complexes. 10
- Q2. State the great Orthogonality theorem (without proof) & its Importance 10

MSc I Semester

Paper No. – CH-2

Concept in Organic Chemistry

- Q1. Explain Nature of Bonding in Organic Molecules? 10
- Q2. Explain Different Mechanisms of Elimination Reaction? 10

MSc- III

Paper No. - CH-14

Chemistry of Bio molecules

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| Q1. What are Exergonic and Coupled Reaction? | 05 |
| Q2. Why ATP is Source of Energy? | 05 |
| Q3. Explain Structure of NAD? | 05 |
| Q4. Explain Redox Phenomenon by FAD? | 05 |

MSc- III

Paper No. - CH-15

Catalysis , Solid State& Surface Chemistry

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| Q1. Explain in brief Various Type of Defects? | 10 |
| Q2. Write Mathematical Derivation for Thermodynamics of Defects Formation? | 10 |

MSc- III

Paper No. - CH-16

Analytical Techniques & Data Analysis

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| Q1. Explain Principle Methodology & Application of Different Types of Digestion for Liquid & Solid Materials? | 10 |
| Q2.State Basic Principles of Diffusion Current and Dropping Mercury Electrode? | 10 |

MSc- III

Paper No. – CH-13

Resonance Spectroscopy

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| Q1. Write Short Notes On Following- | 10 |
| 1. Stern Voliner Equation | |
| 2. Fate of Excited Molecules | |
| Q2. Explain Basic Principle of Photoelectron Spectroscopy & Photo acoustic Spectroscopy? | 10 |