

Semester — III MDC Paper – III
Time THURSDAY & Friday (5th Lecture)

Name of Program	B.Sc. Physical Sciences	Program Code	UMLS4 or UMPS4
Paper No.	MDC Paper – III	Nomenclature	Core Chemistry
Name of the Course	Discipline Specific Course	Course Code	25CHEX03MD01
Credits	02	Maximum Marks	50
Hours per Week	02	External Marks	35
Duration of Examination	02 Hrs	Internal Marks	15

Week	Topic covered week wise
Week 1	Unit–I Chemical Bonding Types of chemical bonding- ionic bond, covalent bond, coordinate bond
Week 2	hydrogen bonding, Van der Waals interactions
Week 3	Valence bond theory, concept of hybridization and shapes of simple molecules,
Week 4	VSEPR theory, Molecular orbital theory
Week 5	Unit–II Basic Principles of Organic Chemistry Types of organic reactions, electrophiles and nucleophiles
Week 6	Homolytic and heterolytic fission of a covalent bond, inductive effect,
Week 7	Electromeric effect and resonance effect.
Week 8	Unit–III Corrosion Introduction and causes of corrosion, types of corrosion
Week 9	dry and wet corrosion, factors affecting corrosion
Week 10	methods to prevent corrosion
Week 11	Unit–IV Biomolecules Carbohydrates- Classification of carbohydrates,
Week 12	structure and importance of monosaccharides,
Week 13	Importance of disaccharides and polysaccharides.
Week 14	Proteins- Amino acids, peptide linkage
Week 15	primary, secondary, tertiary and quaternary structure of proteins,
Week 16	importance of proteins, denaturation of proteins
Week 17	Nucleic Acids- Structure and function of DNA and RNA.
Week 18	Revesion of Section I &II & test
Week 19	Revesion of Section III& IV & test

