

Syllabus for Entrance Examination - M. Tech. in Green Technology

2024-25

Twelve Principles of Green Chemistry, Pollution types and prevention, water quality and treatment, air and soil pollution, effluent treatment.

Fundamentals of Organic Chemistry – nomenclature, stereochemistry, reactions of aromatic and aliphatic systems

Chemical periodicity, bonding structure and reactivity, organometallic compounds and their applications

Principles of chemical thermodynamics and reaction kinetics, phase equilibria, solutions – solubility, mole fractions and equilibria in solutions, fundamentals of electrochemistry, corrosion and its prevention.

Catalysis and its role in green chemistry and technology- homogeneous and heterogeneous catalysis, supported catalysts, activity and selectivity aspects

Modern Instrumental Methods and conventional methods of analysis
Separation and purification processes

Basic Biochemistry- carbohydrates, amino acids, proteins, enzymes and co enzymes enzymatic reactions, nucleic acids

Nano materials synthesis and applications

Safe laboratory practices, biosafety, chemical safety, common laboratory and industrial hazards and preventive measures.