

COMEDK UGET Syllabus

COMEDK UGET Syllabus for Chemistry

| Topics | Chapters |
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| Nuclear Chemistry | <ul style="list-style-type: none"> • Nature of Radiation from Radioactive Substances • Nuclear Reactions: Radioactive Disintegration Series • Artificial Transmutation of Elements • Nuclear Fission and Nuclear Fusion • Isotopes and their Applications • Radio Carbon Dating |
| Chemical Reactions and Chemical Kinetics | <ul style="list-style-type: none"> • Rate of Reaction • Instantaneous Rate of Reaction and Order of Reaction • Factors affecting Rates of Reactions – Factors Affecting Rate of Collisions Encountered Between the Reactant Molecules, Effect of Temperature on the Reaction Rate, Concept of Activation Energy Catalyst. • Effect of Light of Rates of Reactions. • Elementary Reactions as Steps to more Complex Reactions. • How Fast are Chemical Reactions? • Rate Law Expression • Order of a Reaction • Units of Rates and Specific Rate Constant • Order of Reaction and Effect of Concentration • Temperature Dependence of Rate Constant • Fast Reactions • Mechanism of Reaction • Photochemical Reactions |
| Biomolecules | <ul style="list-style-type: none"> • Cell and Energy Cycle Carbohydrates: Carbohydrates, Mono-saccharides, Saccharides, Poly-saccharides, Amino Acid • Peptides – Structure and Classification • Proteins and Enzymes – Structure of Proteins, Role of Enzymes. |
| Coordination Chemistry | <ul style="list-style-type: none"> • Coordination Compounds • Nomenclature: Isomerism in Coordination Compounds, Bonding in Coordination Compounds, Werner's Coordination Theory • Applications of Coordination Compounds |
| Polymers | <ul style="list-style-type: none"> • Synthetic and Natural Polymers Classification on Polymers • Natural and Synthetic Polymers • Important Uses of Teflon, PVC, Polystyrene, Nylon-66, Terylene, Bakelite. |
| Chemistry in Action | <ul style="list-style-type: none"> • Dyes • Chemical in Medicines (antipyretic, analgesic, antibiotics & tranquilizers) • Rocket Propellants (Structural Formulae Non - Evaluative) |
| Environmental Chemistry | <ul style="list-style-type: none"> • Environmental Pollutants: Soil, Air and Water • Major Atmospheric Pollutants: Acid Rain, Ozone and its Reactions causing Ozone Layer Depletion, Effects of the Depletion of Ozone Layer, Industrial Air Pollution. |