

SARDAR PATEL UNIVERSITY**Programme: B.Sc (Chemistry)****Semester: VI****Syllabus with effect from: November/December-2013**

Paper Code: US06CCHE02	Total Credit: 3
Title Of Paper: Organic Chemistry	

Unit	Description in detail	Weighting (%)
I	Amino Acids And Proteins Proteins, Structure of amino acids, Amino acids as dipolar ions, Isoelectric point of amino acids, Configuration of natural amino acids, Preparation of amino acids, Peptides. Geometry of the peptide linkage, Determination of structure of peptide. Terminal residue analysis. Partial hydrolysis. Synthesis of peptides, Proteins. Classification and function. Denaturation, Structure of proteins, Peptide chain, Side chain. Isoelectric point. Electrophoresis, Conjugated proteins. Prosthetic group. Enzyme (definition), Coenzymes, Secondary structure of protein, Mechanism of enzyme action. Chymotrypsin, Nucleoproteins and nucleic acids. Basic Text & Reference Books :- ➤ Organic chemistry, 6 th Ed., By Morrison and Boyd.	
II	Purines And Nucleic Acids Introduction, Uric acid, Purine derivatives, Xanthine bases, Nucleic acids, Structure of nucleosides, structure of nucleotides, Ribonucleic acids, Deoxyribonucleic acids, Chemical and enzyme synthesis of the polynucleotides. Basic Text & Reference Books :- ➤ Org. Chem., Vol II, by I.L. Finar. ➤ Organic chemistry by A. Bahal & B. S. Bahal, 16 th Ed.	
III	Alkaloids Introduction, function, classification, isolation and properties of alkaloids. General methods employed for determining the structure of alkaloids. Introduction, isolation, physiological action, properties, extraction, constitution and synthesis of Adrenaline, Nicotine, Papaverine. Introduction, isolation and constitution of Quinine. Basic Text & Reference Books :- ➤ Organic chemistry of natural products by Gurdeep R. Chatwal, Vol. I.	
IV	Organic Photochemistry Principles of photochemistry. Photochemical energy. Electronic excitation, excited states, modes of dissipation of energy (Jablonski diagram). Energy transfer and photosensitization. Photochemistry of carbonyl compounds. Photoreduction. Norrish type -I and -II reactions. Photochemical reactions of cyclic ketones. Paterno-Buchi reaction. Photochemistry of α , β -unsaturated ketones. Photochemistry of olefins. Cis-trans isomerification. Dimerization reactions. Photo-Fries rearrangement. Barton reaction. Basic Text & Reference Books :- ➤ Organic Reaction Mechanism by S.M. Mukerji. ➤ Organic Reaction Mechanism by R.K. Bansal. ➤ Organic Chemistry by R.O.C. Norman.	

