

SARDAR PATEL UNIVERSITY
Programme: BSC (BOTANY)
Semester: VI
Syllabus with effect from: November 2013

Paper Code: US06CBOT06	Total Credit: 3
Title Of Paper: Plant Metabolism and Biochemistry	

Unit	Description in detail	Weighting (%)
1	Enzymes: Historical background, Classification, nomenclature and importance of enzymes, role of enzymes as bio catalysts, physiological and biochemical properties, concept of holo-enzymes, coenzymes, apoenzymes & prosthetic groups, mechanism and kinetics of action, enzyme inhibition, isozymes, allosteric enzymes, industrial aspects of enzymology.	
2	Carbohydrates: Structure and importance of mono, di and polysachharides. Glycolysis - anaerobic conversion of pyruvate into ethanol and lactate, reversibility and inhibition, glycolysis, oxidative decarboxylation of pyruvate into acetyl Co A, Kreb's cycle, oxidative phosphorylation, substrate phosphorylation, Electron Transport System.	
3	Nitrogen and protein metabolism- Structure and properties of Amino acids and proteins, biological nitrogen fixation and Nitrogen cycle, Catabolism of amino acids, ammonia assimilation, transamination, deamination.	
4	Lipid metabolism: Structure, properties, classification and functional significance of fatty acids and triglycerides. Alpha, beta and omega oxidation of fatty acids. Energy balance and overall process.	

Basic Text & Reference Books:

- Biochemistry : Lehninger
- Biochemistry : Satyanarayana

