

**SARDAR PATEL UNIVERSITY**  
**Programme: BSC (BIOTECHNOLOGY)**  
**Semester: VI**  
**Syllabus with effect from: June 2012**

<b>Paper Code:</b> US06CBIT06	<b>Total Credit: 3</b>
<b>Title Of Paper:</b> Metabolism	

<b>Unit</b>	<b>Description in detail</b>	<b>Weighting (%)</b>
<b>1</b>	Glycolysis:central pathway of glucose metabolism and regulation, citric acid cycle, pentose phosphate pathway. Gluconeogenesis.	
<b>2</b>	$\beta$ -oxidation of fatty acids and ketogenesis. Nucleotide biosynthetic pathways.	
<b>3</b>	Amino acid metabolism- Biosynthesis (Overview), deamination, transamination, decarboxylation of amino acids, Urea cycle	
<b>4</b>	Hydrolysis of ATP and energy rich compounds. Oxidative phosphorylation and ATP synthesis, Electron transport chain and chemiosmotic theory, binding change hypothesis.	

**Basic Text & Reference Books:**

- Biochemistry by Zubay.
- Biochemistry by Stryer.
- Text book of biochemistry - Vasudevan & Shreekumari
- Biochemistry - Lehninger

