

SARDAR PATEL UNIVERSITY
Programme: B.Sc (Biochemistry)
Semester: V
Syllabus with effect from: June 2013

Paper Code: US05CBCH03	Total Credit: 3
Title Of Paper: Metabolism - I	

Unit	Description in detail	Weightage (%)
I	<p>Carbohydrates Metabolism - I Basic concepts- anabolism, catabolism, intermediary metabolism, metabolic pathway, regulation of metabolism. Carbohydrates metabolism</p> <ul style="list-style-type: none"> • Glycolysis: central pathway of catabolism & its regulation. • Citric acid cycles & its regulation. • Rapaport-leubering cycle. • Gluconeogenesis and its regulation • Glycogen metabolism and its regulation. • Pentose Phosphate pathways, glyoxalate cycle, Cori's cycle. 	25%
II	<p>Lipid Metabolism Oxidation of saturated fatty acid & its energetic (alpha, beta, omega) –</p> <ul style="list-style-type: none"> • Oxidation of unsaturated fatty acids & odd chains fatty acids. • Ketone body formation. • Role of liver & adipose tissues in lipids metabolism. <p>Biosynthesis of (1) fatty acid (2) TG (3) phospholipids (4) spingolipids & (5) Cholesterol.</p> <ul style="list-style-type: none"> • Hormonal regulation of lipids metabolism. 	25%
III	<p>Disorder of Carbohydrates Carbohydrates</p> <ul style="list-style-type: none"> • Glycogen storage disease. • Galactosamine. • Fructose intolerance. • Pentosuria. <p>Tay Sach's diseases</p>	25%
IV	<p>Disorder of Lipid. Lipid</p> <ul style="list-style-type: none"> • Gaucherie's disease. • Niemann pieck disease. • Refsum's disease. • Carnitine / carnitine Acyl transferase deficiency. 	25%

Basic Text & Reference Books:

- Principal of biochemistry - Lehninger.
- Biochemistry - Satyanarayan.
- Review of physiological biochemistry - Harold Harper.
- Biochemistry- Lipin Cott's.

