

**SARDAR PATEL UNIVERSITY**  
**Programme & Subject: M.Sc (Industrial Biotechnology)**  
**Semester: III**  
**Syllabus with effect from: June - 2011**

<b>Paper Code: PS03EIBT01</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Human Physiology</b>	

Unit	Description in Detail	Weightage (%)
	<p>Blood-composition and functions of plasma, erythrocytes including Hb, leucocytes and thrombocytes and plasma proteins. Hemoglobinopathies, thalassemias and anemias. Blood clotting – extrinsic and intrinsic pathways of blood clotting, laboratory test to measure coagulation and thrombolysis.</p> <p>Digestive system – Composition, functions and regulation of saliva, gastric, pancreatic intestinal and bile secretions – digestion and absorption of carbohydrates, lipids, proteins nucleic acids, minerals and vitamins.</p> <p>Excretory system – structure of nephron formulation of urine, glomerular filtration, GFR, tubular reabsorption of glucose.</p> <p>The Muscular System – Types of muscles and their functions</p> <p>Nervous System- Structure of neuron, function and organization of nervous system, Nerve impulse transmission.</p> <p>Endocrine glands – secretion and function Reproduction, pregnancy and lactation. Hormonal disturbances.</p>	

**Basic Text & Reference Books:-**

- Molecular Biology of the cells: Alberts et. al., Garland Publications Inc. NY
- Cell and Molecular Biology by E D P de Robertis and E M F de Robertis.
- Text book of Medical Physiology by A. C. Guyton and J. E. Harcourt.
- Text book of Medical Physiology by Garong.
- Text book of Biochemistry and Human Biology by Talwar.
- Principles of anatomy and physiology by Tortora Grabowski, 10<sup>th</sup> edition

