

SARDAR PATEL UNIVERSITY
Programme: MSc (Biotechnology)
Semester: III
Syllabus with effect from: June 2011

Paper Code: PS03EBIT01	Total Credits: 4
Title Of Paper: Human Physiology	

Unit	Description in detail	Weightage (%)
1	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.	25 %
2	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	25 %
3	Excretory system: structure of nephron formulation of urine, glomerular filtration, GFR, tubular reabsorption of glucose. The Muscular System Types of muscles and their functions	25 %
4	Nervous System: Structure of neuron, function and organization of nervous system, Nerve impulse transmission. Endocrine glands secretion and function Reproduction, pregnancy and lactation. Hormonal disturbances.	25 %

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, 10th edition

