

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

Paper Code: US05CBCH05	Total Credit: 3
Title Of Paper: Human Physiology & Clinical Endocrinology	

Unit	Description in detail	Weightage (%)
I	Definition of Physiology-Sub disciplines of Physiology. Level of Structural Organization that make up the Human Body. Brief Introduction of the eleven System of the Human Body (Major Elements – O, C, H, and N). Lesser elements (Ca ⁺ , K, S, Na, Cl ⁻ , Mg, Iron and Trace Elements).	25%
II	Respiratory system: <ul style="list-style-type: none"> • Definition of respiration. • Transport of Respiratory Gases • Acidosis and Alkalosis Circulation: <ul style="list-style-type: none"> • Basic Structure of Heart, Cardiac Cycle. 	25%
III	Urinary system: <ul style="list-style-type: none"> • Basic Structure of Nephron, Urine Formation, GRF, Tubular load, T_{max} , Plasma Clearance Muscle: <ul style="list-style-type: none"> • Types of Muscle, Composition and Mechanism of Muscle contraction (Skeletal Muscle). Neuron and neuroglia, organization of nervous system, nerve impulse transmission.	25%
IV	Clinical Endocrinology Hormone- Definition. Overviews of the important Endocrine Gland and Their Hormones, Role of Hormones Receptors. <ul style="list-style-type: none"> • Chemical Classes of Hormones, • Mechanism of Hormone Action- Action of Lipid Soluble and Action of Water soluble Hormones, Functions of GH, T₃ T₄, aldosterone, insulin Diabetes Mellitus: <ul style="list-style-type: none"> • Definition, classification (WHO), biochemical and clinical symptoms. • Life threatening complications due to hyperglycaemic condition. 	25%

Basic Text & Reference Books:

- Principles of Anatomy and Physiology-Gerard. J. Tortora and Bryn Derrickson
- Text Book of Medical Physiology-Arthur.C.Guyton, John .E.Hall.
- Medical physiology - vol.1 and vol.2. - C.C. chattergy.
- Concised medical physiology - Sujit Chaudhary.

