

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Bio Chemistry)
Semester: VI
Syllabus with Effect from: November-2013

Paper Code: US06CBCH04	Total Credit: 3
Title Of Paper: Clinical Biochemistry.	

Unit	Description in detail	Weightage (%)
I	Clinical biochemistry- definition, major causes of disease Correlation of biochemical pathways with diseases development with appropriate example. Blood: general composition- physical characteristics, functions, Functions of RBC, WBC, platelets, blood fluid- composition and functions of C.S.F and lymph. Composition of urine - normal and abnormal.	25%
II	Plasma Proteins- Biochemical Importance. General Characteristics of Plasma Proteins Function of Plasma Proteins. Chemistry, clinical significance and importance of -- Albumin, HaptoGlobin, α AT ₁ , Transferrin, Ceruloplasmin. Lipoproteins (different types, their role, factor affecting LDL and HDL concentration in blood.). Lipid profile.	25%
III	Organs Functions Tests: Liver Functions Tests (Serum Bilirubin, V.D. Bergh, Urine bilirubin, Total plasma protein Total albumin A: G ratio, Serum Cholesterol), Jaundice-(types, causes and symptoms). Kidney Functions Tests, (Tests based on Glomerular filtration – Urea clearance Test Endogenous Creatinine clearance test, Inulin clearance test. Tests based on tubular function- Concentration test, Dilution test.) , Nephritis-(types, causes and symptoms).	25%
IV	Haemostasis - vascular system, platelets plugs, formation of blood clotting, Role of Blood Platelets, biochemical reaction in the clotting process. Fibrinolytic systems. Haemoglobin- chemistry and structure of haemoglobin. Definition and types of anemia. Normal types and properties of haemoglobin. Life cycle of RBCs.	25%

Basic Text & Reference Books:

- Harper's illustrated Biochemistry - Robert. K. Murray.
- Human Biochemistry -James. M. Orten & Otto.W.Neuhaus.
- Biochemistry by clinical correlation by Devlin.

