Clinical Biochemistry
BBT4022

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Course Objective: This course is intended to provide the basic knowledge of Clinical Biochemistry. Major organ functions and testing of organ functions.

Learning Outcome: Students will have idea of body fluids. Functioning of various tissues and organs. Role of Hormones and signal transfer. They will develop competence so that they are better candidate for employment.

UNIT I: Introduction of Clinical Biochemistry
Introduction of Clinical Biochemistry, composition & functions of Blood, CSF, formation of blood cells

UNIT II: Structure functions of specialized tissues-
Structure & functions of specialized tissues like muscle, bone, nerve, connective tissue, brain, adipose tissue. Signal conduction and amplification of hormonal signal across membrane

UNIT III: Hormone biochemistry
Hormones: Communication among cells and tissues. General mechanism of action ofhormones. Types and classification of hormones: Polypeptide & Steroid. Thyroidhormones.Hormones of pancreas and parathyroid

UNIT IV: Disorders of Hormones & use of radioisotope
Clinical disorders of hormones.Hormone receptors. Organ function tests- Liver function tests. Kidney function test and Pancreatic function tests. Radioisotopes and their clinical applications.

UNIT V: Diabetes and laboratory tests
Biochemistry of Diabetes mellitus, Atherosclerosis, Fatty liver, and obesity.Disorders of vitamins and trace elements.Laboratory test for coagulation and thrmbolysis.

TEXTBOOK:

1. Stryer, Lubert, ed. Biochemistry. New York: W.H. Freeman. Lehninger, Nelson and Cox, (ed.) Principles of Biochemistry. New Delhi: CBS Publishers.

REFERENCE BOOK:

1. Murray, R.K. and P.A. Mayes, ed. Harper's Biochemistry. Devlin, Thomas M., ed. Textbook of Biochemistry with Clinical Correlations. Wiley Liss.

Signature of the Dean	Signature of the Director	Signature of the VC	Date: 08/09/2017 Volume No.:

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