PGDMLT-1004B: BASICS OF BIOCHEMISTRY

Course Code	PGDMLT-1004B
Course Title	Basics of Biochemistry
Course Type	Core Elective
Teaching Time	15×4=60 Hours
Course Outcome	On completion of this course, students will get knowledge of • Introduction, Classification, Biological Functions of Biomolecules (like Carbohydrates, Lipids, Proteins, Nucleic acids). • Enzymes, Coenzymes and Isoenzymes. • Classification, Structure, daily requirements, dietary sources, biological functions and deficiency manifestation of vitamins. • Biochemical function, Dietary requirement, Source, Absorption and excretion of minerals & Electrolytes.

Course Content

Unit No.	Content	Teaching Hours
Uniit-1	**Biomolecules:** Introduction, Classification and Biological Functions	**15 Hr.**
1.1	Carbohydrate	
1.2	Protein	
1.3	Lipid	
1.4	Nucleic acid	
Unit-2	**Enzymology**	**15 Hr.**
2.1	Nomenclature and Classification of Enzyme	
2.2	Co-enzyme	
2.3	Factors affecting Enzyme activity	
2.4	Isoenzymes: LDH, CK and ALP	
Unit-3	**Vitamins**	**15 Hr.**
3.1	Introduction	
3.2	Classification	
3.3	Structure, daily requirements, dietary sources, biological functions and deficiency manifestation of fat-soluble vitamins	
3.4	Structure, daily requirements, dietary sources, biological functions and deficiency manifestation of water-soluble vitamins	
Unit-4	**Electrolyte and Minerals**	**15 Hr.**
4.1	General Functions and Classification of Minerals	
4.2	Biochemical function, Dietary requirement, Source, Adsorption and excretion of: Calcium, Phosphorus, Iron	
4.3	Bio chemical function, Dietary requirement, Source, Adsorption and excretion of: Sodium, Potassium and Chloride	

Reference Books:

Sr. No.	Title/ Edition	Authors	Publiser
1	Biochemistry/4th	Satyanarayana U. & Chakrapani U.	Arunabha Sen and Allied (P) Ltd.
2	Textbook of Biochemistry/4th	Vasudevan D.& Sreekumari S.	Jaypee Pub
3	Textbook of Medical Biochemistry/7th	Chatterjae M. N. and Shinde R.	Jaypee Brothers Publishers
4	Biochemistry/2nd	Rastogi S.C.	Tata McGrow Hill Publishing Company Limited