PGDMLT-1002: IMMUNOLOGY

Semester: I	
Course (subject) Code	PGDMLT-1002
Subject Title	Immunology
Course Type	Core Compulsory
Teaching Time	15×4=60 Hours
Subject Outcome	At the end of the course the students will • Know the basics of immunity and the cells involved in Immune system, Various immunological diseases and their mechanisms, Different types of vaccines • Get knowledge of Antigen and antibody and performance of various antigen-antibody reactions

Course Content

Unit No.	Content	Teaching Hours
Unit-1	**Immunity**	**15 Hr.**
1.1	Introduction	
1.2	Classification of Immunity: Innate, Acquired, Active, Passive, Cell Mediated and Humoral	
1.3	Organs and Cells of Immune System	
1.4	Vaccine: Types and Vaccination Schedule in India	
Unit-2	**Antigen and Antibody**	**15 Hr.**
2.1	Antigen: Definition, Characteristics, Properties Classification of Antigen Types of Antigens- Haptens and Epitopes	
2.2	Antibody: Definition, Characteristics, Properties Structure and Types Monoclonal And Polyclonal Antibody	
Unit-3	**Antigen – Antibody Reactions**	**15 Hr.**
3.1	Factors Affecting Antigen – Antibody reactions	
3.2	Precipitation and Agglutination Reaction	
3.3	Immunochromatographic Technique	
3.4	ELISA and RIA	
3.5	Immunofluorescence	
Unit-4	**Immunological Disorder**	**15 Hr.**
4.1	Hypersensitivity	
4.2	Mechanism and Classification of Autoimmune Disorder	
4.3	Immunodeficiency Disorder	

Reference Books:

Sr. No.	Title/Edition	Authors	Publisher
1	Immunology/7th ed.	Owen,Judith A., PuntStanford, Sharon A., Jones, Patricia P., Kuby	Macmillan Higher education Pub.
2	Immunology	B. S. Nagoba, D. V. Vedpathak	BI Publication Pvt LTD
3	Text book of Medical Microbiology/5th	R. Ananthnarayan C. K. Jayram Paniker	Orient Longman, Madras.
4	Immunology/2nd	P. Lydyard A. Whelan M. W. Fanger	BIOS Scientific Publishers Limited
5	Essential Immunology/6 th	I.M. Roitt	ELBS, London
6	A Hand book of Practical Immunology/1st	G.P. Talwar	Vikas Publishing House.
7	Medical Laboratory Technology/ 4th	Sood R.	Jaypee Brothers.
8	Textbook of Medical Laboratory Technology	P. B. Godkar, D.P. Godkar	Bhalani Pub.