

SECOND SEMESTER EXAMINATION
DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY
Paper Code: DMLT0203
Paper Name: Basic Concepts of Immunology and Serology

Maximum Marks = 70

Maximum Time = 3 Hrs.

The question paper has seven questions. The candidate must attend only five of them. All the questions has equal marks

Question 1.	Discuss the basic concepts of immunology, including the immune system, immune responses, and the role of immunity in defending against pathogens.	14 Marks
Question 2.	Analyze the principles and techniques of serology, including the detection and measurement of antibodies and antigens in diagnostic testing.	14 Marks
Question 3.	Explain the principles of humoral and cellular immunity, including the roles of antibodies, B cells, T cells, and major histocompatibility complex (MHC) molecules.	14 Marks
Question 4.	Discuss the principles of immune responses to infections, including the development of memory and the concept of vaccination.	14 Marks
Question 5.	Analyze the principles and techniques of immunodiagnostic tests, including enzyme-linked immunosorbent assays (ELISA), Western blotting, and immunofluorescence assays.	14 Marks
Question 6.	Discuss the principles and methods of blood typing and compatibility testing, including ABO and Rh blood group systems and cross-matching techniques.	14 Marks
Question 7.	Analyze the emerging trends in immunology and serology, such as immunotherapy, monoclonal antibodies, and the use of immune-based therapies in cancer treatment.	14 Marks