CLUSTER UNIVERSITY SRINAGAR
IMMUNOLOGY
SEM VI
CODE – UGZOOL-17DSE 109
OPTION 2

THEORY **CREDITS (4)**

Unit I

Overview of the immune system

1.1. Introduction to basic concepts in immunology
1.2. Components of immune system
1.3. Principles of innate and adaptive immune system
1.4. Cells and organs of immune system, Haematopoeisis

Unit II

Antigens and antibodies

2.1. Basic properties of antigens
2.2. B and T cell epitopes, haptens and adjuvants
2.3. Structure, classes and function of antibodies, monoclonal antibodies
2.4. Antigen antibody interactions

Unit III

Working of the immune system

3.1. Types, structure and functions of MHC
3.2. Exogenous and endogenous pathways of antigen processing and presentation
3.3. Basic properties and functions of cytokines
3.4. Complement system: Components and pathways

Unit IV

Immune system in health and disease

4.1. Gell and Coombs classification and brief description of various types of hypersensitivities
4.2. Introduction to concept of immunodeficiency (SCID)
4.3. Autoimmune diseases: LEPUS, Arthritis
4.4. Introduction to vaccines

IMMUNOLOGY

PRACTICAL

CREDITS (2)

1. Demonstration of lymphoid organs
2. Histological study of spleen, thymus and lymph nodes through slides/photographs
3. Preparation of stained blood film to study various types of blood cells
4. Ouchterlony's double immune-diffusion method
5. ABO blood group determination
6. Demonstration of
    a) ELISA
    b) Immunoelectrophoresis