

Curriculum plan (NEP; Odd Semester 2025-26)

Teacher Name: Dr. K. Vandana Rani

Paper name: ZH DSE Course-VIII: Immunology

Class type: Theory

Paper shared with: NA

Unit to be taken	Allocated lecture s	Month wise schedule to be followed	Tests/ Assignment s/ Revision/ Presentations etc
Unit 1: Overview of the Immune system i) Early theories of immunology, clonal selection theory. ii) Innate immunity: Components & defensive barriers of innate immunity, iii) Adaptive immune system: Components and attributes of acquired immunity, iv) Humoral and cellular mediated immunity, v) active and passive immunity,	06	06/08/2025 to 21/08/2025	
Unit 2: Antigen and Immunoglobulins i) Antigens and immunogens, ii) antigenicity and immunogenicity, iii) Factors affecting immunogenicity, iv) Antigenic determinants and its properties (B and T cell epitopes), v) Adjuvants and haptens. Immunoglobulins vi) Structure, different classes and function of antibodies, vii) Antigenic determinants on immunoglobulins, viii) Production and applications of monoclonal antibodies.	10	27/08/2025 to 25/09/2025	Assignment s/ Presentation
Unit 3: MHC and Antigen Presentation i) Structure and Functions of MHC (MHC-I & MHC-II) ii) Endogenous and Exogenous pathways of Antigen processing and presentation	4	01/10/2025 to 15/10/2025	Test
Unit 4: Complement System and Cytokines: i) Pathways of complement activation and biological consequences of complement activation. ii) Basic Properties and Functions Cytokines	3	16/10/2025 to 30/10/2025	Revision
Unit 5: Immune system in Health and Diseases i) Vaccines and their Types ii) Gell and Coomb's Classification of Hypersensitivity iii) Autoimmunity and Immuno-deficiency with Suitable examples	7	05.11.25/27.11.25	

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Class type: Practicals (Group: G1+G2)

Paper shared with: Mrs. Shikha Rani

Unit to be taken	Allocated lectures	Month wise schedule to be followed (G1+G2)	Tests/Assignments/ Revision/ Presentations etc
1. Demonstration of Lymphoid Organ	4	4.08.25/11.08.25	
2. Histological Study of Spleen, Thymus and Lymph Nodes through Slides/ Photographs	4	18.08.25/25.08.25	
3. Preparation of stained blood film to study various types of blood Cells	4	1.09.25/8.09.25	Presentation
4. Ouchterlony's double immuno-diffusion method.	4	15.09.25/22.09.25	
5. ABO Blood group antigen determination	4	29.09.25	
6. Cell counting and viability test from splenocytes of farm bred animals/cell lines.	4	06.10.25/13.10.25	
7. i) Demonstration of ELISA and ii) RIA iii) Demonstration of Immunoelectrophoresis iv). FACS v). ELISPOT	4	27-10.25 03.11.25 10.11.25	
	4		
	4		
Repeat		17-11-25-24.11.25	Revision/ File Evaluation/ MOC

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