

Curriculum plan (NEP; Odd Semester 2026-27)

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	4/08/2026 to 21/08/2026	
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	22/08/2026 to 30/09/2026	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	01/10/2026 to 15/10/2026	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	16/10/2026 to 04/11/2026	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	05.11.26/27.11.26	

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Class type: Practicals (Group: G1+G2)

Paper shared with:

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	29.07.26/	
2. Histological Study of Spleen, Thymus and Lymph Nodes through Slides/ Photographs	4	5.08.26/12.08.26	
3. Preparation of stained blood film to study various types of blood Cells	4	19.08.26/26.08.26	Presentation
4. Ouchterlony's double immuno-diffusion method.	4	/2.09.26/09.09.26	
5. ABO Blood group antigen determination	4	2.09.26	
6. Cell counting and viability test from splenocytes of farm bred animals/cell lines.	4	23.09.26/ 30.10.26	
7. i) Demonstration of ELISA and ii) RIA iii) Demonstration of Immunoelectrophoresis iv). FACS v). ELISPOT	4	07.10.26 14-10.26 28.10.26	
	4		
	4		
Repeat		4.11.26-20.11.26	Revision/ File Evaluation/ MOC

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