

TEACHING PLAN: 2018-19
Department of Microbiology
Faculty Member: Dr. Rajashree B Patwardhan

Class- T.Y.B.Sc Sem I Course No : MB 334 Course Name IMMUNOLOGY		
Month	No. of Lectures allotted	Topics
July	12	1. Classification of Immunity 2. Innate, Acquired immunity 3. Active Passive Immunity 4. Antigen: a. Concepts and factors affecting immunogenicity c. Types of antigens: Thymus-dependent and thymus-independent antigens, Synthetic antigens, Soluble and particulate antigens, Autoantigens, Isoantigens 5. Immunoglobulins: a. Structure of basic unit, chemical and biological properties Teaching Methodology: Circulation of notes prior to teaching of the topic, Black board teaching, PPT
August	12	1. Immunoglobulins: b. Characteristic of domain structure, functions of light and heavy chain domains c. Antigenic nature of immunoglobulin molecules d. Molecular basis of antibody diversity (kappa chain, lambda chain and heavy chain diversity)1. Antigenic determinants, haptens and cross-reactivity, Carriers, Adjuvants 2. Hematopoiesis 3. Apoptosis 4. Cells and Organs of Immune System: a. Primary lymphoid organs (Thymus and Bursa): Thymus – structure, thymic education (positive and negative selection) 5. Secondary lymphoid organs – structure and function of spleen, lymph node, mucous associated lymphoid tissue; response of secondary lymphoid organs to antigen, lymphatic system and lymph circulation Teaching Methodology: Circulation of notes prior to teaching of the topic, Black board teaching, you tube videos shown
September	14	Innate Immunity 1. First line of defense 2. Second lines of defense: Humoral components: Defensins, pattern recognition proteins (PRP) and pathogen associated molecular patterns (PAMPs), complement, kinins, acute phase reactants. 5. Cellular components: Phagocytic cells – PMNL, macrophages (reticulo-endothelial cell system) and dendritic cells. Functions: Phagocytosis (oxygen dependent and independent

			Distribution – binomial and Poisson, j. Testing for mean, equality of mean, proportions, equality of proportions, Confidence interval
	48	51	Total lectures Required =51

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