Name of the Teacher: Asstt Proff. Rekhani jyoti pal Class: B.Sc biotechnology 3rd semester

**Lesson Plan**

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| **S No** | **Period** | **Topics to be Covered** | **Academic Activity to be Organized** |
|  | **29 july-31 Aug 2017** | **1) Introduction, history and scope of immunology****2) Terminology of immune system****3) Innate and adaptive immunity covering topics of active and passive, natural and artificial immunity****4) Humoral and cell mediated immunity****5) Features of immune response, memory, cell specificity, recognition of self and non-self****6) B and T cells( types and receptors), Null cells****7) Monocytes and polymorphs****8) Thymus (lymphoid organ)** | **1) Chalk and board****2) Presentation by ppt****3) Animated vedios****4) Notes****5) Group discussion****6) Oral and power point presentation by students** |
|  | **01-30 Sept 2017** | **1) Secondary lymphoid organ- spleen, Lymph nodes****2) Types of antigens, antigenic determinants, epitopes, Hapten****3) Antigenicity and immunogenecity, Factors affecting antigenecity****4) Antigen and immunogen****5) Antibodies: structure,types,classes, properties and functions of immunoglobulins****6) Production of antibodies, Antibody diversity (brief account)****7) Antigen - Antibody interaction, binding sites, binding forces, affinity****8) Avidity, cross reactions, precipitation and agglutination reactions, RIA, ELISA etc. Techniques.** | **1) Chalk and board****2) Presentation by ppt****3) Animated vedios****4) Notes****5) Group discussion****6) Oral and power point presentation by students** |
|  | **01-31 Oct 2017** | **1) Immune responce (primary and secondary)****2) B cell in antibody formation (differentiation, maturation and activation)****3) T cell in antibody formation (differentiation, maturation and activation)****4) MHC molecules (class 1 and 2, functions, role restrictions)****5) Antigen presenting cells****6) factors responsible for antibody formation****7) CMI (factors, cells involve, t- dependent and t -independent antigens)****8) Hypersensitivity and allergic reactions** **9) Autoimmunity, immunological tolerance** | **1) Chalk and board****2) Presentation by ppt****3) Animated vedios****4) Notes****5) Group discussion****6) Oral and power point presentation by students** |
|  | **01-13 Nov 2017** | **1) Complement system : Structure, components, properties and functions.****2) Vaccines : concept, types ( inactivated, attenuated and recombinant vaccines)****3) Peptide and DNA vaccines** | **1) Chalk and board****2) Presentation by ppt****3) Animated vedios****4) Notes****5) Group discussion****6) Oral and power point presentation by students** |
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**Topics of Assignments/ Class Tests to be given to the Students:**

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| **Assignment 1** | **1) immunity and its types****2) types of cell involve in immune system****3) primary lymphoidal organs****4) secondary lymphoidal organs****5) antigens****6) antibodies****7) antigen - antibody interactions****8) MHC 1 molecules, its function, structure and working and activation****9) MHC 2 molecule, its function, structure and working and activations****10) cytokines and lymphokines****11) APC, Hypersensitivity and allergic reactions****12) Vaccines****13) Autoimmunity and immunological tolerance** |
| **Assignment 2** |  |
| **Class Test** | **1) Immunity****2) cells of immune system****3) organs of immune system****4) antigen-antibody interactions** |