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

**Lesson Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| **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** |
|  |  | |  |
|  | | | |

**Topics of Assignments/ Class Tests to be given to the Students:**

|  |  |
| --- | --- |
| **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** |