

**PBT5J001      IMMUNOLOGY AND IMMUNOTECHNOLOGY**

**Module-I:**

The origin of Immunology, types of immunity, humoral and cell mediated immunity, Primary and secondary lymphoid organ, antigen, cells of immune system, immunoglobulin and antibodies, Major Histocompatibility Complex (MHC)

**Module-II:**

Antigen processing and presentation, synthesis of antibody and secretion, Molecular basis of Immunology, Molecular basis of antibody diversity, polyclonal and monoclonal antibody, complement system, antigen-antibody reaction.

**Module-III**

Immune response and tolerance: Regulation of immune response, immune tolerance, hyper sensitivity, autoimmunity; graft versus host reaction, Immuno- deficiency and immuno-proliferate diseases. Dysfunctions of immune system and their modulation, Approaches for correcting immune dysfunction, Vaccinology, Monoclonal antibody technology.

**Text Books:**

1. Immunology: Lydyard, P.M., Whelan, A., Fanger, M.W., 1<sup>st</sup> Ed., Viva Books.
2. Essential Immunology: Roitt, I.M., 9<sup>th</sup> Ed.(1997) Blackwell Scientific, Oxford, UK.
3. Immunology: Kuby, J. 3<sup>rd</sup> Ed. (1997) Freeman W. H., oxford.
4. Immunotechnology by A Khan, Pearson Publication

**Reference:**

1. Immunology and Immunotechnology, Ashim K. Chakravarty, Oxford University Press
2. Microbiology and Immunology by B K Patnaik, T.C. Kar, H.N. Thatoi, India-Tech publication. New Delhi