

## **BCO 204-PIMMUNOLOGY-1 [P]**

**Practical Course Credit: 1**

**Contact Hours: 30**

1. Blood grouping determination
2. Ouchterlony test
3. Immunodiffusion slide techniques
4. Precipitin and agglutination
5. Widal Test
6. Coomb's Test
7. C-Reactive Protein determination
8. ELISA
9. Rapid Tests [POCTs] for
  - a. Malarial antigens Pv/Pf
  - b. Dengue IgM and IgG antibodies
  - c. Hepatitis HBsAg
  - d. Human Luteinising hormone
10. Rheumatoid Arthritis Factor determination

### **Reference Books (Composite list for theory and practicals)**

1. Roitt, I., Peter Delves., Roitt's Essential Immunology.
2. Kindt, T.J., Osborne, B.A., Goldsby R.A. & Kuby Immunology.
3. Barrett, J.T., Microbiology and Immunology Concepts.
4. Goldsby, R. A., Kindt, T. J., Kuby, J. & Osborne, B.A. Immunology.
5. Benjamini, E., Coico, R. & Sunshine, G., Immunology A Short Course.
6. Sompayrac, L.M., How the Immune System Works.
7. Sharon, J., Basic Immunology.
8. Abbas, A.K., Lichtman, A.H., & Pillai, S., Cellular and Molecular Immunology.
9. Janeway, C.A., Walport, M. J. & Travers, P., Immunobiology: The Immune System in

## **BCC 204-T IMMUNOLOGY-I [T]**

**Theory Course Credit: 2**

**Contact Hours: 30**

### **1. (15)**

Immunity classification – innate and acquired immunity.

Cells and organs of immune system, organisation of lymphatic system

Macrophage activation; phagocytosis

Complement system: Complement fixation via classical and alternative pathway and its regulation, components of cascade – their structures and functions, complement fixation test

Cell mediated and humoral immunity. Primary and secondary immune response

### **2. (15)**

Antigens: definition, haptens, antigenic determinants, polysaccharides, lipids, nucleic acids; Immunogen

Antibodies: immunoglobulins (structure, classes and properties); antibody dependent cell cytotoxicity (ADCC)

Antigen – antibody reactions: *in vitro* precipitation, flocculation, agglutination, haemagglutination, passive haemagglutination, immunofluorescence, immunodiffusion, immunoprecipitation, immunoelectrophoresis, ELISA, RIA.

Types and functions of T Cells

Inflammation

Hypersensitivity reaction and autoimmune disorders: definitions

Immunohaematology: Blood group systems – MN, Rh, ABO; hemolytic disease of new born