



RP-003-001519

Seat No. _____

Third Year B. Sc. (Sem. V) (CBCS) Examination

February - 2019

BT - 503 : Immunology

(Old Course)

Faculty Code : 003

Subject Code : 001519

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Objectives : 20

- (1) The latin term immunis means _____.
- (2) Give names of primary lymphoid organs.
- (3) Interaction between soluble antigen and antibody results in visible clumping called _____.
- (4) The causative agent of tuberculosis ?
- (5) In a xenograft, source of grafted tissues is from _____.
- (6) Define Vaccine.
- (7) What are primary mediators in Type I hypersensitive reaction ?
- (8) Genes that encode MHC I & II molecules are linked together on which chromosome in human ?
- (9) The process by which hematopoietic stem cells are differentiate to form cells of immune system ?
- (10) T lymphocytes mature in _____.
- (11) Give Full form: ELISA.
- (12) Which immunoglobulin present as membrane bound receptors on B lymphocytes?
- (13) Who discovered hybridoma technology for production of monoclonal antibodies ?
- (14) The immunologically active regions of an immunogen that bind to antigen specific membrane receptor is known as _____.

- (15) Give one example of Antigen presenting cell.
- (16) Name an autoimmune disease of joints.
- (17) Which cells of immune system mainly responsible for phagocytosis ?
- (18) Which immunoglobulin has capacity to cross placenta ?
- (19) CD4 T cells are generally restricted by which class of MHC ?
- (20) Who give the term "Vaccine" ?

- 2** (a) Answer any **three** out of six : **6**
- (1) What are Macrophages ?
 - (2) Draw a labeled diagram of basic structure of antibody.
 - (3) Define: Agglutination.
 - (4) Main functions of MHC molecules.
 - (5) Define Immunity.
 - (6) What is Autograft?
- (b) Answer any **three** out of six : **9**
- (1) Explain types of WBC.
 - (2) Write Hybridoma technology.
 - (3) Explain in brief Inflammation.
 - (4) Write down about Structures of MHC molecules.
 - (5) Explain protozoan infection with example of malaria.
 - (6) What is Epitopes ?
- (c) Answer any **two** out of five : **10**
- (1) Explain hematopoiesis.
 - (2) Short note on structure and functions of Immunoglobulins.
 - (3) Write down about antigen processing and presentation pathway.
 - (4) Short note on Hypersensitive reaction.
 - (5) Explain Secondary lymphoid organs. (any two)

- 3 (a) Answer any **three** out of six : 6
- (1) What is phagocytosis ?
 - (2) What are Haptens ?
 - (3) What are the functions of Cytotoxic T lymphocytes.
 - (4) Enlist factors influence immunogenicity.
 - (5) What is autoimmune disease ? Give example of autoimmune disease.
 - (6) Give difference between MHC class I & II molecules.
- (b) Answer any **three** out of six : 9
- (1) Explain Graft rejection.
 - (2) Regulation of complement system.
 - (3) Explain in brief T cell receptor.
 - (4) Write Influenza virus infection and treatment.
 - (5) Explain adjuvant.
 - (6) Write Western blotting.
- (c) Answer any **two** out of five : 10
- (1) T cell maturation, activation & differentiation.
 - (2) Explain AIDS as immunodeficiency disease.
 - (3) Properties and function of cytokines.
 - (4) Adaptive immune response.
 - (5) Short note on types of vaccines.
-