

Seat No. : _____

N15-107
November-2014
B.Sc., Sem.-V
MI-303 : Microbiology
(Principles of Immunology)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :**
- (1) Draw Figures wherever necessary.
 - (2) Mention correct question number against each answer.
 - (3) Figures to the right indicate marks.

1. Answer the following questions : (Any **two**) **14**
 - (a) Write an account for active immunity.
 - (b) Discuss the immune response with respect to their amount and duration of development.
 - (c) Describe the significance and types of MHC molecules.
 - (d) Enlist and explain functions of peripheral lymphoid organs.

2. Answer the following questions : (Any **two**) **14**
 - (a) Discuss essential requirements for a substance to be an antigen.
 - (b) Describe various applications of precipitation reactions.
 - (c) Explain the physicochemical structure of immunoglobulin monomer.
 - (d) Describe the significance of skin tests.

3. Write on the following questions : (Any **two**) **14**
 - (a) Discuss the causes and consequences developed, for delayed type of hypersensitivity reactions.
 - (b) Describe the factors responsible for autoimmune disorders.
 - (c) Explain the role of host and graft in transplantation immunity.
 - (d) What is immunodeficiency ? Explain the nature and characteristics of two major types.

4. Answer the following questions : (Any **two**) **14**
- (a) Write an account for immunoprophylaxis.
 - (b) Describe major types of vaccines with respect to their safety and hazards.
 - (c) Discuss significance blood banking.
 - (d) What are the major blood group antigens ? Discuss their significance.
5. Write briefly in **one** or **two** lines : **14**
- (a) Enlist four antigens found in bacterial cell.
 - (b) What are haptens ?
 - (c) Write one diagnostic application of monoclonal antibody.
 - (d) What is herd immunity ?
 - (e) Write one character of enzyme essential for ELISA.
 - (f) Write name of tuberculin test.
 - (g) Write names of complement fixation pathway.
 - (h) Name two types of stem cells.
 - (i) Write two significant characteristics of immune response.
 - (j) Write name of one disease caused by B cell deficiency.
 - (k) Write the nature of antigens found in agglutination reactions.
 - (l) Write names of antibodies based of their heavy chain structure.
 - (m) Write names of two toxoid vaccines.
 - (n) Enlist non cellular constituents found in blood.
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