

No. of Printed Pages : 03

Roll No.

BB-332

M. Sc. EXAMINATION, May 2017

(Second Semester)

(Main & Re-appear)

BT-504-MS

BIOTECHNOLOGY

Immunology-I

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-09/8) M-BB-332

P.T.O.

Unit I

1. Discuss in detail about the genetic-organization of Immunoglobulin genes. What is the basis of generation of Antibody-diversity. **20**
2. (a) Write 5-milestone discovery in immunology.
(b) Superantigens.
(c) Mechanism of phagocytosis and relevance in living system. **5+5+10=20**

Unit II

3. Describe in detail about the role of Major Histocompatibility Complexes (MHCs) in immune reactions. Cite specific examples. **20**
4. Write short notes on the following : **6+6+7=20**
 - (a) T-cell receptors
 - (b) Antigen presentation
 - (c) Humoral vs Cell-mediated immune-response.

M-BB-332

2

Unit III

5. Write the principle, working and analysis of cell through flow cytometry. **20**
6. Differentiate the following : **6+7+7=20**
 - (a) Immunological tolerance and graft-rejection
 - (b) Affinity and Avidity
 - (c) Monoclonal and Polyclonal Antibody.

Unit IV

7. Discuss specifically the following : **6+7+7=20**
 - (a) What is autoimmunity ? Explain with some abnormal physiology in human body.
 - (b) Explain the entry of HIV in CD4 cell.
 - (c) Explain the mechanism of tissue injury in type-I-hypersensitivity.
8. Describe in detail about type-III hypersensitivity. Differentiate between immediate and delayed type hypersensitivity. **20**

(3-09/9) M-BB-332

3

70