

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

2	5	9	4	1
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Exam. Code :

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M.Sc. Bio-Technology 2nd Semester

(2056)

BIOLOGY OF IMMUNE SYSTEM

Paper-MBIO-201

Time Allowed : Three Hours] [Maximum Marks : 80

Note :— Attempt **FIVE** questions in all selecting **one** question from each unit. Q1 is compulsory.

1. Answer briefly:

- (a) ELISA
- (b) Polysaccharide vaccines
- (c) Tumor antigens
- (d) Lectins
- (e) Dendritic cells
- (f) Affinity maturation
- (g) Endogenous antigens
- (h) Cytokines.

2×8=16

UNIT-I

2. (a) Explain the differences between innate and acquired immunity. 8
- (b) Discuss the key features of cellular immunity, components, and their role in host defense. 8
3. (a) Discuss the nature and biology of super antigens. 8
- (b) Explain the process of B-cell maturation and differentiation. 8

UNIT-II

4. (a) Discuss the biological consequences of complement activation. 8
- (b) List the differences between $\alpha\beta$ and $\gamma\delta$ T cell receptors. 8
5. (a) Write a note on the thymic selection of T cell repertoire. 10
- (b) Elaborate on the rôle of MHC in disease susceptibility and immune responsiveness. 6

UNIT-III

6. (a) Elaborate on the establishment and maintenance of immunological tolerance. 8
- (b) Discuss the generation of Type III hypersensitivity and its implications. 8

7. (a) Differentiate between T cell and NK cell mediated cell lysis. 8
- (b) Write a note on any organ specific autoimmune disorder. 8

UNIT-IV

8. (a) Discuss the immunologic basis of graft rejection. 8
- (b) Explain the role of oncogenes in malignant transformation of cells. 8
9. (a) Describe the advantages and disadvantages of attenuated vaccines. 8
- (b) Elaborate on principle and applications of agglutination. 8