(i) **Printed Pages : 2**   **Roll No.** ....

(ii) **Questions   : 9**   **Sub. Code :** | 1 | 2 | 1 | 4 |
                                      Exam. Code : | 0 | 0 | 6 | 9 |

B.Sc. (Hons.) 3rd Semester

1125

BIO-TECHNOLOGY

Paper–BIOT-Sem-III-III-T : Immunology–I

Time Allowed : Three Hours]   **[Maximum Marks : 67**

Note :– Attempt total **five** questions in all, including Q. No. **1** which is compulsory and at least **one** question from each Unit.

1. Answer briefly :

    (a) What molecules on the T cells help in T cell responses ?

    (b) Give two differences between innate and acquired immunity.

    (c) What is clonal anergy ?

    (d) What is the inheritance of haplotype in context of MHC genes ?

    (e) Name the secretory immunoglobulin.

    (f) What important role do the cytokines have ?

    (g) What is antibody agglutination ?

    (h) What is the difference between humoral and cell mediated immune response ?

    (i) What is Immunogenicity ?

    (j) Define hybridoma. $1.5 \times 10 = 15$

1214/BHJ-32898   **[Turn over**

UNIT–I

2. (a) Write a note on Hematopoiesis.

   (b) What is clonal expansion of B cells ?   13

3. (a) Explain the different granulocytes and their role.

   (b) What is the role of the antigen presenting cells ?   13

UNIT–II

4. (a) Differentiate between primary and secondary lymphoid organs.

   (b) What are the different types of Cell adhesion molecules ?

       13

5. (a) What is the role of pattern recognition receptors ?

   (b) What is the role of IgE and mast cells in allergy ?   13

UNIT–III

6. (a) Write a note on structure of antibody.

   (b) Explain the peptide binding by MHC I and II.   13

7. (a) What are the different subclasses of IgG and their functions ?

   (b) What is the role of regulation of MHC expression in disease susceptibility ?   13

UNIT–IV

8. (a) What are the applications of monoclonal antibodies ?

   (b) How are antigen-antibody interactions used as tools for research and diagnosis ?   13

9. Write a note on antigen-antibody interactions with emphasis on the strength of interactions and cross reactivity.   13