

**D 70204**

(Pages : 2)

Name.....

Reg. No.....

**FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2019**

(CUCBCSS-UG)

Biotechnology

**BTY 5B 08—IMMUNOLOGY AND IMMUNOTECHNOLOGY**

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer any two out of four questions in about 1500 words.  
Each question carries 10 marks.*

1. What is innate immunity ? Explain the types of innate immune system.
2. Describe the structure and function of primary lymphoid organs.
3. Briefly explain the type I hypersensitivity reaction.
4. What is autoimmune disease ? Explain the different types of autoimmune diseases.

(2 × 10 = 20 marks)

**Section B**

*Answer any seven out of fourteen questions in about 750 words.  
Each question carries 5 marks.*

5. Write about the historical milestones of immunology.
6. Briefly describe the cell mediated immunity.
7. What is phagocytosis ? Explain it.
8. Describe the structure and functions of spleen.
9. Differentiate the primary and secondary immune response.
10. Describe the route of administration of super antigen.
11. Briefly explain the structure and function of IgA.
12. Explain the principle and applications of western blotting.
13. Discuss about the immunoglobulin superfamily.
14. Explain the principle and applications of blood grouping.
15. Discuss about the erythroblastosis fetalis.
16. How to measure the Ag-Ab binding ?
17. Discuss about the cancer immunotherapy.
18. Describe the active immunization.

(7 × 5 = 35 marks)

**Turn over**

**Section C**

*Answer all questions in about 300 words.*

*Each question carries 3 marks.*

19. Write about the humoral immunity.
20. Describe the functions of dendritic cells.
21. What is adjuvant ? Explain its function.
22. Describe the principle and applications of mantoux test.
23. What is monoclonal antibody ? Explain its application.

(5 × 3 = 15 marks)

**Section D**

*Answer all questions in about 200 words.*

*Each question carries 2 marks.*

24. What is cell mediated immunity ?
25. What is antibody ?
26. What is arthus reaction ?
27. Define tumor antigen.
28. What is vaccine ?

(5 × 2 = 10 marks)