

**D 70329**

(Pages : 2)

Name.....

Reg. No.....

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

(CUCBCSS-UG)

Microbiology

**MBY 5B 11—IMMUNOLOGY**

Time : Three Hours

Maximum : 80 Marks

**Part A**

*Answer all questions.*

*Each question carries ½ mark.*

1. Precipitation reactions occur when antibodies react with ——— antigens.
2. The class of antibody that appears first in the blood during immune response is ———.
3. Transfusion reactions are ——— hypersensitivity reactions.
4. Small chemical group on the antigen molecule that can react with the antibody are called ———.
5. Humoral immunity is mediated by ———.
6. Give an example for systemic autoimmune disease.
7. Antigens that activate B-cells to produce antibodies without the involvement of T<sub>H</sub> cells are ———.
8. Fc portion of antibody is involved in ———.
9. Inappropriate response of the immune system against self components is termed ———.
10. The migration of different subsets of lymphocytes to different tissues is known as ———.
11. Graft or tissue transplanted from one species to another is ———.
12. Expand VDRL.

(10 × 1 = 10 marks)

**Part B**

*Answer all questions.*

*Each question carries 2 marks.*

- |                            |                           |
|----------------------------|---------------------------|
| 13. Inflammation.          | 14. MALT.                 |
| 15. Immunoelectrophoresis. | 16. Macrophages.          |
| 17. Western blotting.      | 18. Rheumatoid arthritis. |
| 19. Ig M.                  | 20. TCR.                  |
| 21. Incomplete antibodies. | 22. Interferons.          |

(10 × 2 = 20 marks)

**Turn over**

**Part C**

*Answer any six questions.  
Each question carries 5 marks.*

23. Explain the mechanism of alternative pathway of complement activation. List the functions of complement system.
24. Explain in detail the structure and functions of secondary lymphoid organs.
25. What is autoimmunity ? Explain the mechanism of autoimmune diseases giving examples.
26. Differentiate between innate immunity and adaptive immunity. Give an account on the anatomical barriers to microbial invasion.
27. Give an account on antigenic determinants on immunoglobulins.
28. Explain the mechanism of humoral immune response.
29. Explain the immunological reactions leading to graft rejection.
30. Explain the process of T-cell maturation.

(6 × 5 = 30 marks)

**Part D**

*Answer any two questions.  
Each question carries 12 marks.*

31. Describe the structure of immunoglobulins with the help of neat diagrams. List the features and functions of different classes of immunoglobulins.
32. List the features of antigen-antibody reactions. Explain the various precipitation and agglutination reactions used in diagnosis. Add a note on RIA.
33. Write a note on the mechanism and clinical manifestations of Type II and Type III hypersensitivity reactions.

(2 × 12 = 24 marks)