

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2020**  
**ZOOLOGY**  
**FZOL3C08 - IMMUNOLOGY & CYTOGENETICS**

**Time: Three Hours**

**Maximum Weightage: 30**

**Part A: Answer any *four* questions. Each carries *two* weightage.**

1. Give a brief account of adjuvants with suitable examples.
2. Write brief notes on immunodiffusion reactions.
3. Briefly explain the features of primary immunodeficiency diseases with a suitable example.
4. Write short notes on ADCC.
5. Provide a brief account of specific immunosuppressive therapy.
6. Give a brief account of Cadherins.
7. Briefly discuss JAK-STAT signaling pathway.

**(4 × 2 = 8 weightage)**

**Part B: Answer any *four* questions. Each carries *three* weightage.**

8. Explain the features of systemic autoimmune diseases with a suitable example.
9. With a suitable diagram explain the structure of lymph node.
10. Briefly discuss about B cell receptors.
11. Give an account of whole organism vaccine.
12. Briefly describe the classical pathway of complement activation.
13. Explain the structure and biological role of G protein linked receptors.
14. Describe the composition of extracellular matrix.

**(4 × 3 = 12 weightage)**

**Part C: Answer any *two* questions. Each carries *five* weightage.**

15. Explain different types of hypersensitivity reactions.
16. Discuss the organization and mechanism of rearrangement of immunoglobulin genes.
17. With suitable diagrams, describe the structure and cellular distribution of Class II MHC molecule and also discuss the pathway by which this molecule present antigens to T cells.
18. Describe the process of apoptosis. Add notes on its significance.

**(2 × 5 = 10 weightage)**