

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2023
(Regular/Improvement/Supplementary)

ZOOLOGY
FZOL3C08 - IMMUNOLOGY & CYTOGENETICS

Time: 3 Hours

Maximum Weightage: 30

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

1. Briefly explain CD₃ complex.
2. With a suitable diagram describe the structure of Class I MHC molecules.
3. Explain the significance of RSS in VDJ recombination.
4. Provide an account of transplantation antigens.
5. Elaborate on any four factors that influence immunogenicity.
6. Discuss the significance of fibronectin.
7. Briefly explain the signaling pathway through cGMP.

(4 × 2= 8 weightage)

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

8. Briefly discuss the mechanism of agglutination reactions.
9. Explain the properties of T-cell Epitopes.
10. Provide an account of myeloid and lymphoid lineages in hematopoiesis.
11. Explain the intracellular pathway of apoptosis.
12. Discuss about delayed type hyper sensitivity.
13. Explain the processing and presentation of endogenous antigens.
14. Give an account of cell adhesion molecules.

(4 × 3= 12 weightage)

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

15. Write an account on antibody engineering and its significance.
16. With suitable examples explain autoimmune diseases.
17. Describe the properties, functions and therapeutic applications of cytokines in immune system.
18. What is GPCR? Explain the mechanism of cell signaling through it.

(2 × 5= 10 weightage)