

M.Sc. Examination, 2018
Semester – II
Biotechnology
Core Course-VII
(Immunology)

Time: 3 Hours

Full Marks: 40

Questions are of value as indicated in the margin.

Answer *any four* questions

1. (a) Explain PAMPs and DAMPs? Mention the role of soluble PRRs with examples.
(b) Cite two experimental evidences that first linked TLRs to innate immunity in vertebrates.
(c) How can an innate inflammatory response become harmful? (3+2)+3+2=10
 2. (a) Describe the structure of IgM and IgA.
(b) Explain the role of RAG1/RAG2 enzymes in somatic recombination of lymphocytes. What is 12/23 rule? 4+(3+3)=10
 3. (a) Distinguish primary and secondary immune responses with examples.
(b) What are the functional differences of Salk and Sabin polio vaccines? 6+4=10
 4. Describe with proper diagrams the role of Chaperon proteins in antigen presentation through Class-I and Class-II MHC. What are professional APCs and why are they named so? 7+3=10
 5. (a) What are Central and Peripheral tolerance? Mention the role of T_{reg} cells in tolerance.
(b) “Tolerance is critical to the normal functioning of the immune system”– Comment. (4+3)+3=10
 6. Write short notes on *any four* questions: 2½×4=10
 - (a) Indirect ELISA
 - (b) Lectin Pathway of complement activation
 - (c) ADCC
 - (d) NK cells
 - (e) Structural classification of Chemokines
 - (f) DNA vaccine
-