

Exam. Code : 210004

Subject Code : 4236

M.Sc. Botany 4th Semester

IMMUNOLOGY

Paper—BOTC-725

Time Allowed—3 Hours]

[Maximum Marks—50

Note :- The question paper consists of **three** Sections. Students are required to attempt all the Sections. Section A consists **Eight** questions each carrying 1 mark and all questions are compulsory. Section B consists **ten** questions each carrying 3 marks and students are required to attempt any **Seven** questions. Section C consists **five** questions each carrying 7 marks and students are required to attempt any **Three** questions.

SECTION—A

1. Write short notes on the following :—
 - (a) Allograft
 - (b) Cross-reactivity
 - (c) Mast Cells
 - (d) Opsonin
 - (e) Anaphylactic Shock
 - (f) Colony Stimulating Factor
 - (g) Cytokines
 - (h) Adjuvants.

SECTION—B

1. Give an overview of antibody mediated immunity.
2. Draw well-labeled diagrammatic sketch of lymph node with brief description.
3. What are the Natural Killer Cells ? What is their role in immune system ?
4. How the bifunctionality of antibodies can be proved experimentally ?
5. What do you understand by monoclonal antibodies ? Discuss in brief.
6. What are secondary immune responses ?
7. Discuss the cutaneous associated lymphoid tissue.
8. What are Superantigens ?
9. Describe briefly the lymphatic system.
10. Describe the process of phagocytosis.

SECTION—C

1. Explain both the pathways of Complement System with well-labelled diagrams.
2. Discuss the response of immune system in Acquired Immuno Deficiency Syndrome.
3. Explain the process of Antigen recognition by the cells of Adaptive immunity in detail with suitable diagrams.
4. What are Mononuclear Phagocytes ? How they act to provide protection against infection ?
5. Describe the historical perspectives of immunology. Discuss briefly the secondary immuno deficiency disorders.