

6. Write notes on the following :
- (a) Monoclonal antibodies
 - (b) Hematopoiesis
 - (c) Allelic exclusion
 - (d) Isotypes
 - (e) Cross reactivity.
7. Discuss major histocompatibility complex and its role in immune response.
8. Explain in detail the role of the following in immune system :
- (a) Spleen
 - (b) Eosinophils
 - (c) Phagocytes
 - (d) Mast cells
 - (e) Natural Killer cells.

Exam. Code : 210004
Subject Code: 4937

M.Sc. Botany 4th Semester
IMMUNOLOGY
Paper - BOTC-725

Time Allowed—2 Hours] [Maximum Marks—50

Note :— There are **Eight** questions of equal marks. Candidates are required to attempt any **Four** questions.

1. (A) What do you mean by immunodeficiency ? Explain the secondary immunodeficiency diseases.
(B) Give a brief account of major landmarks in the history of immunology.
2. Explain the humoral and cell mediated immunity in detail. How both are different from each other ?
3. (A) What do you understand by immunogenicity ? Explain the immunogenicity of different molecules.
(B) Explain the terms : Super antigens and Heptens.
4. Discuss the process of antigen recognition by cells of innate and adaptive immunity. How both are linked to each other ?
5. Draw neat & clean general diagram of immunoglobulin. Discuss different antibodies, their biological functions and concentration in human body.