



# CBCS SCHEME

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18BT43

## Fourth Semester B.E. Degree Examination, Jan./Feb. 2021 Immunotechnology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain the role of secondary lymphoid organs in Immuno system. (10 Marks)  
b. What are Immunoglobulins? Explain the classification of Immunoglobulin in detail. (10 Marks)

OR

- 2 a. With diagrammatic representation, explain Humoral and cell mediated immunity. (10 Marks)  
b. Write a short note on : i) Haematopoiesis ii) Phagocytosis. (10 Marks)

### Module-2

- 3 a. What are MHC complex? Explain the role of MHC molecules in Antigen processing and presentation. (10 Marks)  
b. What is Hybridoma technology? Discuss in detail production of Monoclonal antibody. (10 Marks)

OR

- 4 a. Describe in detail the mechanism of B – cell activation. (12 Marks)  
b. Write a note on T – cell ontogeny and types. (08 Marks)

### Module-3

- 5 a. What is Hypersensitivity? Discuss in detail Gell and Coombs classification of Hypersensitivity. (12 Marks)  
b. Explain Systemic autoimmune disorder, with an example. (08 Marks)

OR

- 6 a. What are Vaccines? Discuss in detail Recombinant vector vaccines and DNA vaccines. (12 Marks)  
b. Discuss in detail immunological aspects of AIDS. (08 Marks)

### Module-4

- 7 a. What is HLA typing? Discuss its role in Organ transplantation. (10 Marks)  
b. Write a short note on :  
i) Tumor antigens ii) Human stem cell transplantation. (10 Marks)

OR

- 8 a. Explain Allograft rejection and add a note on its mechanism. (12 Marks)  
b. Write a note on Immuno Suppressive drug. (08 Marks)

### Module-5

- 9 a. What is Agglutination with respect to antigen – antibody interaction? Discuss in detail different types of it. (12 Marks)  
b. Explain principal and working of Sandwich ELISA , add a diagnostic application of it. (08 Marks)

OR

- 10 Write short note on :  
a. Radioimmunoassay b. Immuno electrophoresis.  
c. Western blot analysis. d. Blood typing. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.