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Name.....

Reg. No.....

## FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2022

Biotechnology

BTY 5B 08—IMMUNOLOGY AND IMMUNOTECHNOLOGY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

## Section A (Short Answer Type Questions)

Answer any **ten** questions.  
Each question carries 2 marks.

1. Distinguish allotype and idiotypic.
2. Hypervariable region.
3. Tumor suppressor genes.
4. Distinguish interferon and interleukins.
5. Secretory IgA.
6. Interferon.
7. Combined immunization.
8. Dendritic cells.
9. Multiple sclerosis.
10. MALT.
11. RIA.
12. Hybridoma.

(10 × 2 = 20 marks)

## Section B (Paragraph Type Questions)

Answer any **six** out of seven.  
Each question carries 5 marks.

13. Give an account on secondary lymphoid organs.
14. What is delayed type hypersensitivity? Explain with example.

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15. Discuss different passive immunization methods.
16. Discuss principle and applications of any two immunological assay.
17. Explain how HLA helps in transplantation immunology.
18. Discuss different types of vaccines.
19. What are macrophages? Explain its role in immune response.

**Section C (Essay Type Questions)**

*Answer any one, which carries 10 marks.*

20. Write an essay on cells of immune system.
21. What are recombinant vaccines? Discuss the method involved in the production of recombinant vaccine.