

(Pages : 4)



M - 4505

Reg. No. :

Name :

Fourth Semester B.Sc. Degree Examination, February 2022

Career Related First Degree Programme under CBCSS

2(a) Botany and Biotechnology

Core Course

BB 1472 : IMMUNOLOGY

(2019 Admission)

Special Examination

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer **all** the questions in a word or **one** or **two** sentences. **Each** question carries **1** mark.

1. What are chemokines?
2. Define adjuvants.
3. What is precipitation reaction?
4. What is IgM?
5. What is epitope?
6. Comment on CD4+ T cell.
7. What are DNA vaccines?

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8. What is immuno diffusion?
9. Give note on thymus.
10. Define an isotype.

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks. (Answer not exceed one paragraph)

11. Give an account on immuno-electrophoresis.
12. What are Neutrophils?
13. Write a note on Polyclonal antibody.
14. Comment on RIA.
15. What are inflammatory cells?
16. Describe DPT.
17. What is Fab?
18. Comment on T helper (TH) cells.
19. What are attenuated vaccines?
20. What is adaptive immunity?
21. What is cross reaction?
22. Define phagocytosis.
23. Comment on Myasthenia gravis.
24. Differentiate between allotypes and idiotypes.
25. Explain Hypervariable region.
26. Comment on NK- Cells

(8 × 2 = 16 Marks)



SECTION – C

Answer any **six** questions. Each question carries **4** marks. (Answer not to exceed 120 words)

27. Explain types of hypersensitivity in humans.
28. Explain different components of immune system.
29. Describe Hashimoto's thyroiditis.
30. Explain the various mechanisms involved in Physical defence.
31. Differentiate between T cells and B cells.
32. Explain cell mediated immune responses.
33. Describe different types of antigen-antibody reactions.
34. Explain the techniques of hybridoma technology.
35. Explain the structure and functions of IgG.
36. What is ELISA? Give note on different types of ELISA.
37. Give a detailed account on secondary lymphoid organs.
38. Explain the various types of immunity.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. Each question carries **15** marks. Answer not to exceed three pages.

39. Describe in detail the genetic basis of antibody diversity.
40. Write a short essay on the features and functions of cells of immunity.
41. What are vaccines? Give a brief account on types of vaccines.
42. Explain the different types of immunoglobulins and its functions.



43. Explain the biological consequences of antibody-antigen reactions.
44. Write an essay on systemic auto immune diseases.

(2 × 15 = 30 Marks)
