

(Pages : 3)

T – 2726

Reg. No. : .....

Name : .....

**Fourth Semester B.Sc. Degree Examination, July 2024**

**Career Related First Degree Programme under CBCSS**

**Botany and Biotechnology**

**Vocational Course VII**

**BB 1472 : IMMUNOLOGY**

**(2019 Admission Onwards)**

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What are haptens?
2. What is the function of spleen?
3. Define epitope.
4. What is booster dose?
5. What is immunodiffusion?
6. Comment on precipitation reaction.
7. What are eosinophils?
8. Comment on spleen.
9. Expand RIA.
10. What is antigenicity?

**(10 × 1 = 10 Marks)**

P.T.O.



## SECTION – B

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

11. Explain the principle of ELISA.
12. What is FC region?
13. What is affinity maturation?
14. Comment on autoantibodies.
15. What is avidity?
16. What is Hashimoto's thyroiditis?
17. Explain endogenous antigens.
18. What is Rh incompatibility?
19. Explain hemagglutination.
20. Explain VDJ recombination.
21. What are adjuvants?
22. Explain the structure of IgG.

**(8 × 2 = 16 Marks)**

## SECTION – C

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

23. Explain hematopoiesis.
24. Write a short note on cells of immune system.



25. Define immunity. Explain its types.
26. Discuss the properties and types of antigens.
27. Compare and contrast allo types and idiotypes.
28. Explain the principle behind ABO blood grouping.
29. Write a note on genetic basis of antibody diversity.
30. Discuss a brief note on Systemic autoimmune diseases.
31. What is hypersensitivity? Explain its importance.

**(6 × 4 = 24 Marks)**

#### SECTION – D

Answer any **two** questions. Each question carries **15** marks. Answer not to exceed **3** pages.

32. What are antibodies? Explain its structure and functions.
33. Explain the organs of immune system. Give note on its structure and functions.
34. Explain different types of vaccines. Give note on common vaccines.
35. Write an essay on production of monoclonal antibodies.

**(2 × 15 = 30 Marks)**

