



Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
(Autonomous)
End Semester Examination: April 2024
Faculty: Science and Technology

Program: B.Sc. Biotech (04)
Program (Specific): Biotechnology
Class: S. Y. B. Sc.
Name of the Course: Immunology
Course Code: 23 BBT 403

Semester: IV

SET: B
Course Type: Core
Max. Marks: 35

Time: 2Hrs

Instructions to the candidate:

- 1) There are 4 sections in the question paper. Write each section on separate page.*
- 2) All Sections are compulsory.*
- 3) Figures to the right indicate full marks.*
- 4) Draw a well labelled diagram wherever necessary.*

SECTION: A

Q1) Answer any FIVE of the following (5/6)

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1. Define immunity.
2. Enlist any two cells of the immune system with their function.
3. State function of SIgA.
4. Explain role of MHC.
5. What is Live attenuated vaccine? Give suitable example.
6. Enlist any two mechanisms of autoimmunity.

SECTION: B

Q2) Answer any FIVE of the following (5/6)

10

1. State any two differences between active and passive immunity.
2. Explain classical pathway of complement activation.
3. Describe secondary immune response.
4. What are adjuvants? Explain their role in vaccine development.
5. Explain subunit vaccine and conjugate vaccine with suitable example.
6. Explain principle of complement fixation test.

[P.T.O.]

SECTION: C

Q3) Answer any TWO of the following (2/4)

8

1. What is polyvalent vaccine? Explain with suitable example.
2. Write a note on Western blotting.
3. Illustrate with neat and labeled diagram the structure of IgM.
4. Describe different mechanisms of innate immunity.

SECTION: D

Q4) Answer any TWO of the following (2/4)

12

1. Give an account on secondary lymphoid organs.
2. What are cytokines? Discuss properties and role of cytokines.
3. What is zone phenomenon? Explain with suitable example immunodiffusion.
4. Give an account on hypersensitivity reactions.