

PRACTICE SET
End Semester Examination, Dec-2025

Program: BMLT
Semester: III
Course: Immunology
Course Code: 42ABMT 308

Course Outcomes	Description
CO1	Understand about immunology and immune system, types of immunity and measurement of immunity.
CO2	Explain about Antibodies and Antigens, types of antigen and antibodies, antigenic determinant.
CO3	Illustrate the Antigen and Antibody reaction, types of antigens and antibody reaction and their measurement.
CO4	Understand about the Complement, structure and function of the Immune system.
CO5	Define sensitization and allergy, explain their immunological basis, and understand the body's immune overreaction to allergens.

Section- A:

(30 x 05 = 150)

1. Define immunity and mention its types. [Module- I, CO1, Remember, LOT]
2. Describe the role of immune cells in the immune response. [Module- I, CO1, Remember, LOT]
3. Differentiate between innate and adaptive immunity. [Module- I, CO1, Analyze, HOT]
4. Explain organs related to the immune system. [Module- I, CO1, Understand, LOT]
5. Evaluate the importance of immune organs in disease prevention. [Module- I, CO1, Evaluate, HOT]
6. Describe the historical development of immunology. [Module- I, CO1, Remember, LOT]
7. Define antigen and antibody. [Module- II, CO2, Remember, LOT]
8. List the properties of a good antigen. [Module- II, CO2, Remember, LOT]
9. Analyze the determinants of antigenicity and specificity. [Module- II, CO2, Analyze, HOT]
10. Describe the structure of an antibody molecule. [Module- II, CO2, Remember, LOT]
11. Evaluate the role of hybridoma technology in antibody production. [Module- II, CO2, Evaluate, HOT]
12. Differentiate between monoclonal and polyclonal antibodies. [Module- II, CO2, Analyze, HOT]
13. Define antigen-antibody reaction. [Module- III, CO3, Remember, LOT]
14. Mention the features of antigen-antibody reaction. [Module- III, CO3, Understand, LOT]
15. Describe precipitation and agglutination reactions. [Module- III, CO3, Remember, LOT]
16. Analyze the importance of ELISA in disease diagnosis. [Module- III, CO3, Analyze, HOT]
17. Describe the complement fixation test briefly. [Module- III, CO3, Remember, LOT]
18. Explain the principle of RIA (Radioimmunoassay). [Module- III, CO3, Understand, LOT]
19. Define MHC and list its classes. [Module- IV, CO4, Remember, LOT]
20. Describe the classical pathway. [Module- IV, CO4, Remember, LOT]
21. Analyze the importance of complement system in immune defense. [Module- IV, CO4, Analyze, HOT]
22. Explain the role of interleukins and interferons. [Module- IV, CO4, Understand, LOT]

23. Describe the alternative pathway. [Module- IV, CO4, Remember, LOT]
24. List deficiencies of the complement system. [Module- IV, CO4, Remember, LOT]
25. Define hypersensitivity and its types. [Module- V, CO5, Remember, LOT]
26. Differentiate between immediate and delayed hypersensitivity. [Module- V, CO5, Analyze, HOT]
27. List examples of autoimmune diseases. [Module- V, CO5, Remember, LOT]
28. Analyze mechanisms of autoimmunity and its clinical consequences. [Module- V, CO5, Analyze, HOT]
29. Evaluate the significance of immunotherapy in allergic disorders. [Module- V, CO5, Evaluate, HOT]
30. Explain the role of antibodies in hypersensitivity reactions. [Module- V, CO5, Understand, LOT]

Section- B:

(15 x 10 = 150)

31. Analyze the relationship between innate and adaptive immunity. [Module- I, CO1, Analyze, HOT]
32. Describe the structure and function of primary and secondary lymphoid organs.
[Module- I, CO1, Remember, LOT]
33. Evaluate different methods of measuring immune response in the laboratory.
[Module- I, CO1, Evaluate, HOT]
34. Describe the structure and types of immunoglobulins. [Module- II, CO2, Remember, LOT]
35. Evaluate hybridoma technology and its medical applications. [Module- II, CO2, Evaluate, HOT]
36. Create a chart showing differences between monoclonal and polyclonal antibodies.
[Module- II, CO2, Create, HOT]
37. Explain the different types of antigen-antibody reactions with examples.
[Module- III, CO3, Understand, LOT]
38. Design an experiment to detect antigen using ELISA technique. [Module- III, CO3, Create, HOT]
39. Describe the methodology and application of ELISA test. [Module- III, CO3, Remember, LOT]
40. Create a schematic representation showing complement activation pathways.
[Module- IV, CO4, Create, HOT]
41. Discuss the process of B-cell and T-cell activation. [Module- IV, CO4, Understand, LOT]
42. Evaluate the role of MHC molecules in antigen presentation.
[Module- IV, CO4, Evaluate, HOT]
43. Evaluate diagnostic methods and treatments for autoimmune diseases.
[Module- V, CO5, Evaluate, HOT]
44. Discuss the immunological basis of allergy and autoimmunity. [Module- V, CO5, Understand, LOT]
45. Create a case study showing immune reactions in hypersensitivity conditions.
[Module- V, CO5, Create, HOT]

Section C:

(10 x 20 = 200)

46. Analyze how the immune system distinguishes self from non-self in detail.
[Module- I, CO1, Analyze, HOT]
47. Explain in detail the immune system, its components and their roles.
[Module- I, CO1, Understand, LOT]
48. Design an experimental approach to produce monoclonal antibodies using hybridoma technology.
[Module- II, CO2, Create, HOT]
49. Evaluate how specific molecular features (such as size, foreignness, and chemical composition) determine the antigenicity and specificity of an antigen. [Module- II, CO2, Evaluate, HOT]
50. Analyze how antigen-antibody interactions form the basis of immunodiagnostics.
[Module- III, CO3, Analyze, HOT]
51. Design an experiment on Flowcytometry, and blotting techniques also mention its application.
[Module- III, CO3, Create, HOT]
52. Explain cytokines, interleukins, and interferons in immune regulation. [Module- IV, CO4, Understand, LOT]
53. Analyze the interrelationship between complement and adaptive immune response.
[Module- IV, CO4, Analyze, HOT]
54. Describe all types of hypersensitivity reactions with examples and Autoimmunity.
[Module- V, CO5, Remember, LOT]

55. Analyze how breakdown of self-tolerance leads to autoimmune diseases.
[Module- V, CO5, Analyze, HOT]

Summary Sheet

CO Wise

CO	Q. No.	Marks
CO1	1,2,3,4,5,6,31,32,33,46,47	100
CO2	7,8,9,10,11,12,34,35,36,48,49	100
CO3	13,14,15,16,17,18,37,38,39,50,51	100
CO4	19,20,21,22,23,24,40,41,42,52,53	100
CO5	25,26,27,28,29,30,43,44,45,54,55	100
Total		500

Unit Wise

Unit	Q. No.	Marks
Module- I	1,2,3,4,5,6,31,32,33,46,47	100
Module- II	7,8,9,10,11,12,34,35,36,48,49	100
Module- III	13,14,15,16,17,18,37,38,39,50,51	100
Module- IV	19,20,21,22,23,24,40,41,42,52,53	100
Module- V	25,26,27,28,29,30,43,44,45,54,55	100
Total		500

Blooms Taxonomy Level (BTL) Wise

BTL	Q. No.	Marks
LOT	1,2,4,6,7,8,10,13,14,15,17,18,19,20,22,23,24,25,27,30, 32, 34, 37, 39, 41, 44, 47, 52, 54	220
HOT	3,5, 9, 11, 12, 16, 21, 26, 28, 29, 31, 33, 35, 36, 38, 40, 42, 43, 45, 46, 48, 49, 50, 51, 53, 55	280
Total		500

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<p><u>Disclaimer:</u> - This is a Practice Set. The Question in End term examination will differ from the Practice set. This Practice set is meant for practice only.</p>
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