

QP Code : P24A022

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER M.Sc. (CBCSS-PG) DEGREE EXAMINATION, November 2024

M.Sc Biology

BIO1C03 : IMMUNOLOGY

2024 Admission Onwards

Time : 3 Hours

Maximum Weightage : 30

Part A

*Short answer type questions: Answer **any four** questions. Weightage 2 for each question*

1. Show the importance of haptens in the immune response. [BTL2]
 2. Explain the significance of smallpox vaccine in the history of Immunology. [BTL1]
 3. Explain the general functions of cytokines in the immune system. [BTL2]
 4. Model how would you determine the compatibility of an allograft between two individuals. [BTL3]
 5. Explain the formation of immune complexes in type III hypersensitivity. [BTL4]
 6. Make use of hybridoma technology to produce monoclonal antibodies against a specific antigen. [BTL3]
 7. Identify in what ways can NK cells contribute to the control of viral infections. [BTL3]
- (4x2 = 8 Weightage)**

Part B

*Short essay-type questions: Answer **any four** questions. Weightage 3 for each question*

8. Recall how the arrangement of immunoglobulin gene segments contributes to antibody diversity. [BTL1]
9. Classify systemic autoimmune diseases with examples. [BTL1]
10. Identify the significance of the cleavage products of complement proteins. [BTL3]
11. Identify the situation in which combination of active and passive immunization be beneficial. [BTL3]
12. Assess the impact of secondary immune deficiency disease that you have studied on a patient's quality of life and how it can be improved. [BTL5]

Turn Over

13. Plan an experimental set up to demonstrate agglutination of antigen. [BTL3]
14. Compare and contrast the functions of the spleen and lymph nodes in the immune system. [BTL2]

(4x3 = 12 Weightage)

Part C

*Essay-type questions: Answer **any two** questions. Weightage 5 for each question*

15. List different methods of immunotherapy used in cancer treatment. [BTL2]
16. Show how would you differentiate between exogenous and endogenous antigen presentation. [BTL1]
17. Compare the antigen processing pathways of MHC class I and MHC class II molecules. [BTL4]
18. Evaluate the methods of vaccine preparation according to their effectiveness. [BTL5]

(2x5 = 10 Weightage)

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