

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2019 - 2020 & thereafter)

M. Sc. DEGREE EXAMINATION - NOVEMBER 2023
BIOTECHNOLOGY
THIRD SEMESTER

COURSE : CORE
PAPER : IMMUNOTECHNOLOGY
SUBJECT CODE : 19BY/PC/IM34
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS **(10 x 2 = 20)**

1. Write down the similarities between humoral and cell mediated immunity.
2. Define apoptosis.
3. Write a note on monoclonal antibodies.
4. List out some cytokine related diseases.
5. Where does the MHC gene is located with a neat diagram?
6. What is the role of complement system in innate immunity?
7. Write a short note on Immunosuppressive therapy.
8. How does the immune system response to transplantation?
9. Write the principle of western blotting.
10. Mention some CMI Technology based immuno diagnosis and therapy.

SECTION – B

ANSWER ALL QUESTIONS **(5 x 8 = 40)**

11. (a) Differentiate between innate and adaptive immunity.
(or)
(b) Explain in detail about haematopoiesis and lymphoid cells
12. (a) Write in detail about antigen structure and properties.
(or)
(b) Give an account on different structure and properties of immunoglobulin.
13. (a) Describe structure of class II MHC molecule.
(or)
(b) Brief about complement system regulation.
14. (a) Give a detailed account on autoimmunity and its treatment.
(or)
(b) Write in brief about different types of hypersensitivity reactions.
15. (a) Comment on various precipitation reaction based immuno diagnosis.
(or)
(b) What is ELISA? Discuss about the principle and its application in immuno diagnosis.

SECTION – C

ANSWER ANY TWO QUESTIONS

(2x20 = 40)

16. Explain the B & T cell maturation, activation and differentiation in development of immune system.
17. Discuss in detail about antibody mediated effector function in mechanism of immune response.
18. Explain in detail about antigen presenting cells and their presenting pathways.
19. Describe briefly about various stages involved in vaccine preparation with examples in immunization procedure.
