



Date:

Registration number:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU- 27
M.Sc. MICROBIOLOGY - II SEMESTER
SEMESTER EXAMINATION: APRIL 2022
(Examination conducted in July 2022)
MB 8218-IMMUNOLOGY

Time- 2 ½ hrs

Max Marks-70

This question paper contains **2** printed pages and **4** parts

I. Answer any Five of the following.

5 x 3 =15

1. a) Name two genes that prevent apoptosis.
b) What is clonal deletion?
c) Define auto transplantation.
2. Relate how hormonal influence affects innate immunity?
3. List three characteristic features of B and T cell epitopes.
4. Give three differences between IgD and IgA.
5. Why would you use an immunotoxin? How is it generated?
6. What does Pleiotropy and cascade effect of cytokines mean?
7. Define and depict with a diagram antigenic shift.

II. Answer any Five of the following.

5x5=25

8. How does the body protect itself from infection by physical barriers?
9. Explain the organ that has nurse cells.
10. How will you interpret a person is positive for Hepatitis B using the Indirect ELISA?
11. Justify how hybridomas are selected in Monoclonal antibody production?
12. Comment on what are the biological consequences of Complements?
13. Compare attenuated, inactivated and DNA vaccines.
14. Write a note on tumour antigens.

III. Answer any Two of the following.

2x10=20

15. Explain Good Pastures syndrome and Scleroderma.
16. Describe antimicrobial and cytotoxic effects of Macrophages.
17. What mechanisms bring about mast cell degranulation in Type I hypersensitivity?

IV. Answer the following.

1x10=10

18. A child needs a kidney transplant. The child does not have an identical twin, but both parents and several siblings are willing to donate a kidney if the MHC match with the patient is good.

- a. What is the best possible MHC match that could be achieved in this situation? **1**
- b. In which relative(s) might you find it? Why? **1**
- c. What test would you perform in order to find the best match? Explain the test. **8**