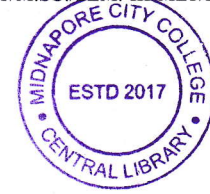


PG (CBCS)  
M.Sc. Semester-III Examination, 2022  
MEDICAL LABORATORY TECHNOLOGY  
PAPER CODE: 302  
(IMMUNOLOGY)



Full Marks: 40

Time: 2 Hours

**GROUP-A**

Answer any **FOUR** from the following questions

4X2 = 8

1. Explain the concept of "self MHC restriction".
2. State the symptoms of food allergy with an example.
3. Indicate the components of "C5 convertase".
4. State any one strategy by which allograft rejection can be prevented?
5. What is anergy? When it may induce in immune cell?
6. Name the auto- antigens and auto-antibodies found in autoimmune thyroiditis?
7. Which is the antigen binding cleft of MHC class I molecule?
8. State the functions of dendritic cell?

**GROUP-B**

Answer any **FOUR** from the following questions:

4×4=16

9. Compare active and passive immunity with specific examples.
10. Explain the role of TCR-CD3 complex in T-cell activation.
11. Experimentally prove that T-cells are involved in allograft rejection.
12. Classify the functions of antibody based on their use in diagnostics techniques.
13. Briefly describe the TLR-MyD88 signalling pathway.
14. How does NK cell kill the tumour cell?
15. What is adjuvant? Explain, "Immune memory is an important feature of vaccine-induced protection". (2+2)
16. What is molecular mimicry?  
How does it induce auto-immune disease. (1+3)



**GROUP-B**

**Answer any TWO from the following questions:**

**2×8=16**

17. Compare monoclonal and polyclonal antibodies. Briefly describe the hybridoma technology for the monoclonal antibody preparation. (2+6)
18. What is tolerance and its types? Describe briefly the mechanism of tolerance induced in the B-cells. (3+5)
19. Mention the effector responses of different types of T-cells.  
Describe the sequential steps involved in B-cell activations towards antibody production. (3+5)
20. Write the principle of ODD techniques. What is postzone effect? Write the clinic-diagnostics applications of FACS techniques. (3+2+3)

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