



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

Course Code: MIM 4534

Max: 75 Marks

Course Title: Molecular Immunology and Immunogenetics

Time: 3 Hr

Section A

Answer any FIVE questions

5 * 15 = 75 marks

1. i) Explain the multigene organization of Immunoglobulin genes? (10 marks)
ii) Comment on Dreyer and Bennett model on Ig genes. (5 marks)
2. Discuss the structure of TCR and mechanism of TCR gene rearrangement.
3. A) Elaborately discuss any three of the minor blood group antigens (8 marks)
B) What is transfusion? Discuss any three of the immune mediated reactions in detail. (7 marks)
4. Describe in detail the structure of MHC Class I and Class II molecules, the organization of MHC genes and the expression of MHC on cell surface.
5. i) Comment on cancer antigens and the modern classification of cancer antigens (7 marks)
ii) Describe any three of the tumor antigens with suitable examples (8 marks)
6. A) What is HLA typing? Write briefly about the various methods of HLA typing.
7. Explain in detail about the ABO blood group system.