



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: MIC 2424

Max: 75 Marks

Course Title: Cell and Molecular Biology

Time: 3 Hours

Section A

Answer any **FIVE** questions

5 × 15= 75 marks

1. Describe the structure of prokaryotic cells with neat illustrations.
2. Describe the structure of the following: a) Nucleus b) flagella c) Chloroplasts.
3. Explain in detail the various phases of mitosis with suitable diagrams.
4. Elucidate the process of generalized and specialized transduction.
5. Give a detailed note on the semiconservative model of DNA replication.
6. Explain the different types of mutation and the causes of mutation.
7. Write notes on the following: a) cytoplasmic matrix b) binary fission