



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

PGB 5507

Molecular biology

Time: 3hrs

Marks: 75

I. Answer any FIVE of the following each not exceeding four pages. (5X15=75)

1. Elucidate the organization of nuclear genome and study the regulation of gene expression using Operon concept.
2. Analyzing the molecular organization of DNA and account for its replication and repair mechanism.
3. Study the transcription and post transcriptional modifications of a Prokaryotic cell.
4. Find a role for initiation, elongation and release factors in the translational process.
5. Compare chloroplast and mitochondrial genome. Highlight their agronomic significance.
6. Evaluate cytoplasmic male sterility used in plant breeding.
7. What are Planticcines and Plantibodies. How will you prepare recombinant vaccines?