



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

BOT 3832/3539
Plant Biotechnology

Max: 75marks
Time: 3hrs

I. Answer any FIVE of the following each not exceeding four pages. (5x15=75)

1. Give an account on somatic embryogenesis and its applications.
2. Illustrate the replication mechanism in prokaryotes.
3. Explain the methods of *Agrobacterium* mediated gene transfer in plants.
4. Concisely present the various types of nucleic acid and protein databases.
5. How a bioreactor is used for production of secondary metabolites.
6. Show how downstream processing is useful in obtaining purified biosynthetic products.
7. Review the benefits and applications of GM crops.