



# THE AMERICAN COLLEGE, MADURAI

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

## Backlog Arrear Examination, March 2021

**BOT 346**  
**Biotechnology**

**Max: 75marks**  
**Time: 3hrs**

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

1. Enlist the interdisciplinary branches and scope of biotechnology.
2. Show how metabolic studies provide a base for biotechnology.
3. Comprehensively present how DNA is packed into chromosomes.
4. Elaborate on protoplast isolation and fusion.
5. Prepare illustrations and draw a flowchart to explain different types of fermentation process.
6. Outline the strategies involved in gene cloning.
7. Enlist the pros and cons of biotechnology in agriculture.