



# 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

**BCH 3421**

**Molecular Biology & Biotechnology**

**Max Marks: 75**

**Time: 3 Hrs.**

### PART A

**Answer any FIVE questions each not exceeding 4 pages:**

**(5 x 15 = 75)**

1. Explain the experimental evidences that DNA is the genetic material.
2. Give a detailed account of the various stages of transcription in prokaryotes.
3. Write about post translational modification in detail.
4. Explain the operon concept with 'Lac' operon as an example.
5. Define mutation. Explain about spontaneous and induced mutation.
6. Give an elaborate account on types of cloning vectors used in genetic engineering.
7. Describe the scope and importance of biotechnology.