



# 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

PGZ 4528

rDNA TECHNOLOGY

Max: 75 marks

Time: 3 hrs.

Answer any FIVE questions

(5 x 15 = 75)

1. Discuss the mode of action of restriction endonucleases in cutting the DNA molecules with suitable examples and illustrations.
2. Describe about any two plasmid based vectors highlighting their methods of construction, salient features and advantages.
3. Explain the principle of PCR and its applications.
4. Outline the steps involved in the production of insulin using rDNA technology.
5. Highlight the steps in the Sanger method of DNA sequencing.
6. Explain the various methods involved in the isolation and purification of plasmids.
7. Describe any three methods of gene transfer. Add a note on their advantages and disadvantages.

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