



**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**

**MIC 3731/3421**

**GENETIC ENGINEERING**

**Max Marks:75**

**Time: 3Hr**

**SECTION-A**

**Answer ANY FIVE questions**

**5X 15 = 75**

1. Explain the various types of restriction endonuclease with suitable example and illustrations .
2. Describe the construction and significance of BAC, YAC used as tools in genetic engineering .
3. Give a detailed account on the following:
  - (I)Southern blotting
  - (II)Western blotting
- 4.Explain the construction and application of genomic library and cDNA library .
- 5.Explain the steps involved in polymerase chain reaction and add a note on any three types of PCR variants .
6. Elaborate the production ,the application ,advantage and disadvantage of recombinant Insulin.
- 7.”DNA vaccines-A promising tool for genetic disease “-substantiate .