No. of Printed Pages : 03 **Roll No. .....**

18AA1451

M. Tech. EXAMINATION, May 2019

(First Semester)

(C Scheme) (Re-appear)

BIO-TECHNOLOGY

BT501C

RECOMBINANT DNA TECHNOLOGY

Time : 3 *Hours*] [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : The candidate is required to attempt *Five* questions, selecting at least *one* from each Unit. All questions carry equal marks.

Unit I

1. Write notes on the following : **7½×2=15**

(a) Bacteriophages

(b) Polymerases.

2. What is gene cloning ? Write in detail on construction of genomic and cDNA library. **15**

Unit II

3. What is *Agrobacterium* mediated gene transfer ? Explain with suitable examples. **15**

4. Write notes on the following : **7½×2=15**

(a) Gene inactivation

(b) Antisense RNA technology.

Unit III

5. Write notes on the following : **7½×2=15**

(a) Cloning of PCR products

(b) Probes and their uses.

6. Write notes on the following : **7½×2=15**

(a) Northern hybridization

(b) RT-PCR.

Unit IV

7. What is Genetic Engineering ? Write down its applications in research and day to day life. **15**

8. Write notes on the following : **7½×2=15**

(a) Genetic modifications for improving agronomic traits

(b) DNA profiling.