Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (BT)   (Sem.–5)

GENETIC ENGINEERING
Subject Code : BTBT-501-18
M.Code : 78235

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

Answer briefly :

1) What is Molecular cloning?

2) What do you understand by mutation?

3) What are cosmids?

4) What is RAPD?

5) What do you understand by site directed mutagenesis?

6) Give two applications of polymerase chain reactions.

7) Give examples of gene therapy.

8) Give names of enzymes involved in recombinant DNA technology.

9) What are high-throughput techniques?

10) Elaborate YAC.

SECTION-B

11) Write a brief note on genetic engineering guidelines.

12) Explain basics of restriction mapping of DNA fragments.

13) Write basic steps involved in DNA and protein sequencing.

14) What are various processes for detection of protein-protein interactions?

15) What are molecular markers? Give their significance.

SECTION-C

16) Write a detailed note on DNA finger printing.

17) Give a detailed account about expression strategies for heterologous genes in bacteria and yeasts.

18) Write brief notes on :

   a) DNA sequencing

   b) Viral vectors

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.