

Roll No.....

Total No. of Printed Pages: [1]

Total No. of Questions: [11]

M.Sc. (Microbiology) (Semester – 4th)

GENOME TECHNOLOGY

Subject Code: MMBLS1401

Paper ID: 21221416

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It carries 16 marks. It consists of 4 questions of 4 marks each.
2. Section B consist of 4 questions of 8 marks each. The student has to attempt any 3 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(4 marks each)

- Q1. Enumerate vectors for cloning and discuss in detail any one.
- Q2. Discuss Griffith's experiment along with diagrams to demonstrate transformation.
- Q3. Define genomic libraries. Discuss its types and write its applications.
- Q4. Define basic principle of blotting. Enumerate and discuss the different types.

Section – B

(8 marks each)

- Q5. Define microinjection and its advantages.
- Q6. Discuss principle, purpose and applications of electroporation.
- Q7. Define restriction mapping and its benefits in genome technology.
- Q8. Define chromosome walking and chromosome jumping and write down differences between them.

Section – C

(10 marks each)

- Q9. Define genetic engineering. Explain the procedure in detail with diagram and write its applications.
- Q10. Define transcription and translation and explain both the procedures in detail with diagram.
- Q11. Define PCR. Discuss principle, types and applications of various types of PCR.