

FACULTY OF SCIENCE

M. Sc. III – Semester Examination, December 2016

Subject : Microbiology

Paper – I : Molecular Biology and Microbial Genetics

Time : 3 Hours

Max. Marks: 80

Note : Answer all questions from Part–A and Part–B. Each question carries 4 marks in Part–A and 12 marks in Part – B.

**PART – A (8 x 4 = 32 Marks)
(Short Answer Type)**

- 1 Melting curves
- 2 Alu sequences
- 3 mRNA splicing
- 4 tRNA
- 5 Mutagenesis
- 6 DNA damage
- 7 Linkage mapping
- 8 Recombination

**PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)**

9 (a) Describe in detail the genome organization of eukaryotes.

OR

(b) Explain Eukaryotic telomere and its replication.

10 (a) Discuss about proteins involved in transcription.

OR

(b) Describe the post translational modifications.

11 (a) Write in detail about Benzers fine structure analysis of gene.

OR

(b) Discuss in detail about site directed mutagenesis and reverse genetics.

12 (a) Write in detail about Generalized and specialized transductions.

OR

(b) Explain sex factors in bacteria.
