

25121

M.Sc. DEGREE EXAMINATION, APRIL 2018.

Genetics and Genomics

SECOND SEMESTER

Paper I — MICROBIAL GENETICS

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Deletion mapping.
2. Missense Mutation.
3. Hfr strain.
4. Chromosome immobilization.
5. M13.
6. Retroviruses.
7. Prions.
8. T4 rll system

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Give a detailed account on the bacterial recombination.

Or

10. Explain in detail about mutations with suitable examples.

11. Discuss the mechanisms of DNA uptake and integration into host cell genome.

Or

12. Write a detailed essay on transduction.

13. Elaborate on the replication of DNA viruses with suitable examples.

Or

14. Give brief account on RNA viruses highlighting the diversity of RNA genomes.

15. Discuss in detail about virus recombination mechanisms of phages.

Or

16. Briefly explain on the evolution of new viruses.

