

25063

M.Sc. DEGREE EXAMINATION, MARCH/APRIL 2019.

SECOND SEMESTER

Microbiology

Paper III — 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. Structure of gene
2. Mutation rate
3. *Rec A* protein
4. Transformation
5. *Hfr* strain
6. D1 particles
7. Cyclins
8. Proto oncogenes

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Discuss about molecular basis of mutations.

Or

10. Write an essay on evolution of mutagens using microbial systems.

11. Write about bacterial genetic map.

Or

12. Discuss about various models of recombination.

13. Write an essay on features, characteristics and classification of plasmids.

Or

14. Give a concise account on transposable elements and their role in genetic analysis.

15. Narrate an elaborate account on cell cycle and its regulation.

Or

16. Discuss about various types of carcinogens.

