

45083

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

FOURTH SEMESTER

BIOTECHNOLOGY

Paper III — FUNCTIONAL GENOMICS

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. Genome project.
2. Cosmids.
3. RFLP.
4. Molecular markers.
5. Gene inactivation.
6. cDNA chips.
7. Concept of TILLING.
8. Metagenomics.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Explain the preparation of ordered cosmid libraries.

Or

10. What are the different methods employed in sequencing of genome?
11. Write an essay on principle and applications of various molecular markers.

Or

12. Explain the different between PCR based and non PCR based molecular markers.

13. Write the principle and application of real time PCR technique.

Or

14. Explain the application of DNA and cDNA chips in molecular biology studies of genome.

15. Write the principle and mechanism of TILLING.

Or

16. How Eco TILLING is useful in the superior gene discovery?

