

35122

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

THIRD SEMESTER

Genetics and Genomics

Paper II — ADVANCED BIOTECHNOLOGY

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. Totipotency.
2. Primary cell culture.
3. Liposomes.
4. Transgenic Fish.
5. Active immunization.
6. Knockout mice.
7. Nanotubes.
8. Applications of nanoparticles.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 Marks.

Each answer should not exceed 6 pages.

9. Write in detail about cell suspension cultures and their applications.

Or

10. Give an account on conditions and media for animal cell culture and add a note on its applications.
11. Explain biological methods of gene transfer with appropriate examples.

Or

12. Give a detailed account on production of transgenic mice and its applications.

13. Give an account on vaccination process and add a note on different types of vaccine.

Or

14. Write in detail about RNA interference and in vitro mutagenesis.

15. Write an account on principles of scanning and tunneling microscope and Atomic Force Microscopy and their applications.

Or

16. Give an account on synthesis and applications of nanoparticles.

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