

35081

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

THIRD SEMESTER

Biotechnology

Paper I — GENETIC ENGINEERING

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

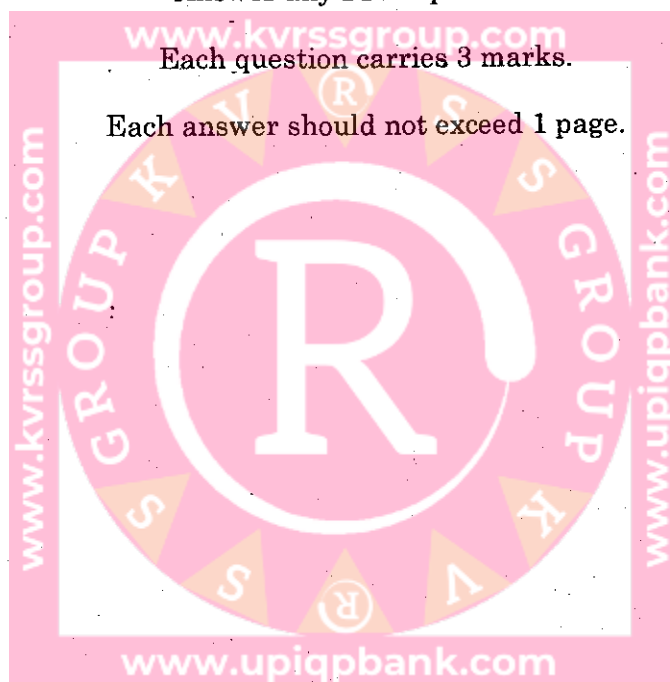
PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Cosmids.
2. DNA ligation.
3. Agrobacterium.
4. Vir-genes.
5. cDNA.
6. Southern blot.
7. Abiotic stress.
8. Phytovaccines.



PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Write about restriction endonucleases, types, properties and their applications in molecular biology.

Or

10. Give details of different molecular vectors used in cloning.

11. Describe methods of introduction of recombinant molecules into host cell.

Or

12. Write short notes on Chloroplast transformation and selection of transformants.

13. Describe the principle and application of polymerase chain reaction in molecular biology.

Or

14. Write about (a) DNA probes (b) Northern blotting.

15. Write an essay on transgenic plants and ecological concerns.

Or

16. Describe the applications of Biotechnology in industry and medicine:

