

THREE YEAR B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2017

THIRD SEMESTER

Part II — Microbiology

MICROBIAL GENETICS AND MOLECULAR BIOLOGY

Time : 3 Hours

Max. Marks : 75

**SECTION - A**

Answer any FIVE of the following.

(Marks : 5 × 5 marks = 25 marks)

1. Structure of tRNA.
2. Plasmid.
3. Tandem duplication.
4. Transformation.
5. Ribosomes.
6. Lac operon.
7. Restriction endonucleases.
8. PBR 322.

**SECTION - B**

Answer any FIVE of the following.

(Marks : 5 × 10 marks = 50 marks)

**UNIT - I**

9. Write about organisation of prokaryotic DNA.

Or

10. Write semiconservative mechanism of DNA replication.

**UNIT - II**

11. Write a note on spontaneous and induced mutations.

Or

12. Explain the mechanism of conjugation in bacteria.

### UNIT - III

13. Write a note on types of RNA and their functions.

Or

14. What is genetic code? Explain about properties of genetic code.

### UNIT - IV

15. Describe the mechanism of transcription.

Or

16. Write about protein synthesis in bacteria.

### UNIT - V

17. Explain about principle and applications of PCR.

Or

18. Give a general account on applications of genetic engineering.

---