PG Even Semester Exam, 2024

Microbiology

2nd Semester

COURSE NO. MBCC- 554

[Microbial Genetics]

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer five questions, selecting one from each unit.

UNIT-I

1. What are the different types of transduction mechanisms? 14

2. Write notes on : 7+7=14

   a. Hfr and F^- conjugation

   b. F' and F^- conjugation

UNIT-II

3. Describe the process of homologous recombination. 14

4. Write short notes on: 7x2=14

   a. Composite transposon.

   b. Cut and paste model for transposition

Turn over

UNIT-III

5. Explain the regulatory control of lytic cycle. 14

6. Describe the functions of 'cro' and C-I repressor in λ phage. 14

UNIT-IV

7. Describe the process of attenuation in 'trp'-(tryptophan) operon. 14

8. Explain the role of C-AMP in lac-operon when E.coli is grown in the presence of glucose and lactose.

UNIT-V

9. Write notes on: 7+7=14

   a. Inc group

   b. Par function in plasmids.

10. Explain the functions of antibiotic resistance plasmid and Ti plasmid. 7+7=14

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