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QP CODE: 24019268



Reg No	:	
Name	:	

# B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2024

# **Second Semester**

B.Sc Microbiology Model III

# Core Course - MB2CRT04 - MICROBIAL GENETICS

2017 ADMISSION ONWARDS

5210DBBB

Time: 3 Hours

Max. Marks: 80

Part A

## Answer any ten questions.

## Each question carries **2** marks.

- 1. How is bacterial DNA organised?
- 2. Give an account on enzymes involved in DNA replication.
- 3. What are extra chromosomal genetic elements?
- 4. What are retrotransposons?
- 5. Which is the experimental microorganism of transformation?
- 6. What is conjugation?
- 7. What are the functions of stop codons?
- 8. Give a brief account of Lac opern.
- 9. What is Induction?
- 10. Write a short note on Deletion with example.
- 11. Write a short note on various components used in performing Ames test.
- 12. Write a short mote on DNA repair mechanism.

(10×2=20)

## Part B

Answer any **six** questions. Each question carries **5** marks.

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- 13. Give an account on Ecoli chromosome.
- 14. Give an account on plasmid replication.
- 15. Describe the effect of transformation.
- 16. Explain abortive transduction.
- 17. Explain enzymes involved in transcription and translation.
- 18. Write in detail about Rho dependent termination.
- 19. Explain Frameshift mutation with examples.
- 20. Discuss about Physical and Chemical mutagens with examples.
- 21. Write in detail about Reversion and Suppression.

(6×5=30)

#### Part C

# Answer any **two** questions. Each question carries **15** marks.

- 22. Write an essay on cut and paste mechanism of transposition.
- 23. Write in detail the origin and transmission of drug resistance.
- 24. Discuss about control of gene expression in prokaryotes. Give a note on positive and negative control using Lac operon.
- 25. Write in detail about the useful phenotypes of mutants.

(2×15=30)