

24P215

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Name :

Reg. No :

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2025

(CBCSS-PG)

(Regular/Supplementary/Improvement)

CC19P ZOL2 C05 - MOLECULAR BIOLOGY AND CYTOGENETICS

(Zoology)

(2019 Admission onwards)

Time: 3 Hours

Maximum: 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Describe the rolling circle model of DNA replication.
2. Discuss about genetic code.
3. Comment on g RNA.
4. Explain translational proof reading.
5. Explain Antisense RNA.
6. Explain the features of mitochondrial genes.
7. Explain the role of telomerase and regulation of teleomere length.

(4 × 2 = 8 Weightage)

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Explain DNA damage and repair systems.
9. Explain mRNA transport and its mechanism.
10. Describe organization and special features of interrupted genes.
11. Discuss about transposons.
12. Explain about genetic recombination.
13. Describe the details of alteration of cell cycle regulation in cancer.
14. Describe the process of transformation, conjugation and transduction in bacteria.

(4 × 3 = 12 Weightage)

Part-C

Answer any *two* questions. Each question carries 5 weightage.

15. Explain Okazaki fragments and describe the enzymes of replication.

16. Explain about Eukaryotic genome.
17. Discuss the details about Transposable genetic elements in eukaryotes.
18. Discuss about the abnormalities of chromosome number and resulting syndromes in human beings.

(2 × 5 = 10 Weightage)
