

22P215

(Pages: 2)

Name:

Reg.No:

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2023

(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. Explain the role of topoisomerases.
2. Explain transcription activators and repressors.
3. Illustrate the biogenesis of ribosome in eukaryotes.
4. Explain lysogenic cycle in phages.
5. Explain role of Rec A protein in genetic recombination.
6. Explain the structure of prokaryotic chromosome.
7. Explain the morphological and ultrastructural properties of cancer cells.

(4 × 2 = 8 Weightage)

Part-B

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

8. Explain the role of telomerase in eukaryotic replication.
9. Explain DNA damage and repair systems.
10. Discuss about wobble hypothesis.
11. Discuss about Cot value and complexity of genome.
12. Describe the details of transposones in Maize.
13. Describe the details of interaction of cancer cells with normal cells.
14. Explain the process of duplication, deletion and translocation with examples.

(4 × 3 = 12 Weightage)

Part-C

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

15. Explain Post -traslational modification of proteins.

16. Explain about gene families.
17. Discuss the details about Transposable genetic elements.
18. Describe various methods of genetic transfers in bacteria and give a brief note on mapping genes by interrupted mating technique.

(2 × 5 = 10 Weightage)
