

25P228

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Name:

Reg.No:

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PBOT2C04 - CELL BIOLOGY, MOLECULAR BIOLOGY AND BIOPHYSICS

(Botany)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

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

1. Explain telomere and its significance.
2. Make a short note on cell adhesion.
3. Describe the structure of nucleotides.
4. Explain about mismatch repair mechanism.
5. Explain buffer.
6. Differentiate between Colorimeter and Spectrophotometer.
7. Express the significance of Cryobiology.

(4 × 2 = 8 Weightage)

Part-B

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

8. Discuss the meiotic defects leading to human diseases.
9. What is the significance of programmed cell death?
10. Explain the molecular mechanism of cellular differentiation.
11. Discuss the role of primosomes and replisomes in replication of DNA.
12. Discuss about genetic code, degeneracy and wobble hypothesis in detail.
13. Make a note on Eukaryotic genome and discuss the evolution of new genes.
14. Express the functions of SDS in SDS-PAGE?

(4 × 3 = 12 Weightage)

Part-C

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

15. Explain the cell cycle events.
16. What are the causes of cancer? Describe the different stages of cancer development. Add a note on its diagnosis.
17. Explain the major events in prokaryotic translation. Add a note on post translational events.
18. Explain the theory, types and applications of centrifugation.

(2 × 5 = 10 Weightage)
