

21P228

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Name: .....

Reg.No: .....

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2022**

(CBCSS - PG)

(Regular/Supplementary/Improvement)

**CC19P BOT2 C04 - 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 the check point of cell cycle
2. Explain the significance of p53 gene in cancer.
3. Describe the post translational changes in protein synthesis
4. Explain the significance of origin and evolution of genome.
5. Explain the function of buffer in biological systems.
6. Discuss Ion Exchange Chromatography.
7. Explain Beer Lamberts Law.

**(4 × 2 = 8 Weightage)**

**Part-B**

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

8. Describe different Phases of cell cycle.
9. Explain cellular interaction and its applications.
10. Explain the molecular mechanism of cellular differentiation.
11. Describe the structure of telomere and explain the role of telomerase in solving end replication problems.
12. Explain repression & induction mechanism of Trp Operon.
13. Describe DNA repairing mechanism in Prokaryotes.
14. Predict the application of autoradiography in biological system.

**(4 × 3 = 12 Weightage)**

### **Part-C**

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

15. Explain the structure of Nucleosome.
16. Discuss the mechanism and significance of cell signalling.
17. Describe in detail the Double Helical Structure of DNA Watson-Crick Model.
18. Describe lypophilization. Discuss the methodology and its application in biological research.

**(2 × 5 = 10 Weightage)**

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