

19P427

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Name:

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021

(CBCSS - PG)

CC19P BOT4 E02 - GENETIC ENGINEERING

(Botany – Elective course)

(2019 Admission - Regular)

Time: Three Hours

Maximum: 30 Weightage

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

1. Write a note on RAMPO.
2. Briefly describe the procedure for the construction of a genomic library.
3. Comment on SDS-PAGE.
4. Comment on T4 DNA ligase.
5. Write a note on Phage M13.
6. Describe the function of alkaline phosphatases.
7. What are Cry proteins?

(4 × 2 = 8 Weightage)

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

8. Write a short note on western blotting technique.
9. Explain in brief southern blotting and its applications.
10. What are molecular markers? Explain any two molecular markers enumerating its advantages and disadvantages.
11. Explain the methods of screening of genes in cDNA library.
12. Discuss the factors affecting the success of gene therapy.
13. What is Nanotechnology? What are its applications?
14. What are the important features of cloning vectors? Comment on PBR 322.

(4 × 3 = 12 Weightage)

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

15. Describe the various molecular hybridization techniques used for genome analysis.
16. Discuss the different post-translational modifications in eukaryotes.
17. Describe the various steps involved in the production of transgenic plants with biotic stress tolerance.
18. Discuss *Agrobacterium tumefaciens* as a natural genetic engineer.

(2 × 5 = 10 Weightage)
