

20P429

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Name:

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2022

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P BOT4 E02 - GENETIC ENGINEERING

(Botany – Elective course)

(2019 Admission onwards)

Time: Three Hours

Maximum: 30 Weightage

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

1. Explain the procedure of SSCP.
2. Comment on RAMPO.
3. Brief account on DNA profiling.
4. Give an account on the types of gels used for electrophoresis.
5. Discuss about Western blotting and its applications.
6. What is bioremediation? Give two examples of genetically modified microorganism in environmental clean ups.
7. Write a brief account on any two GMO crops.

(4 × 2 = 8 Weightage)

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

8. What are the important features of cloning vectors? Comment on PBR 322.
9. Discuss Agrobacterium mediated gene transfer in developing transgenic plants.
10. Explain different approaches in gene therapy.
11. What is nanotechnology? Discuss its significance.
12. Discuss the vector independent gene transfer methods.
13. Describe the procedure of AFLP. Enumerate the advantages over RAPD.

(4 × 3 = 12 Weightage)

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

14. Explain the principle of PCR. Describe the variants of PCR along with its application.
15. Compare and contrast the chemical and enzymatic methods of DNA sequencing.
16. Describe the tools used in rDNA technology. Explain methods of creating rDNA molecules.
17. Explain the significance of genetic engineering in medicine and industrial field.

(2 × 5 = 10 Weightage)
