

24P430

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Name:

Reg.No:

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PBOT4E02 - GENETIC ENGINEERING

(Botany)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

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

1. Explain enhancers and silencers.
2. Applications of Northern blotting.
3. Assess the role of RFLP
4. Assess RAMPO
5. Express the name of genes responsible for herbicide resistance.
6. Explain the role of Taq polymerase in genetic engineering.
7. Explain the significance of GMOs used against environmental Pollution.

(4 × 2 = 8 Weightage)

Part-B

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

8. Explain the characteristics of genetic code and codons.
9. Distinguish between YAC and BAC artificial vectors.
10. Explain chromosome jumping and walking.
11. Assess the role of Microsatellite.
12. Explain the principles of Electrophoresis. Explain PAGE briefly.
13. Examine the role of gene cloning in the field of growth hormone production.
14. Mention the different approaches by which transgenes are introduced into patients during gene Therapy and add a note on its advantages and limitations.

(4 × 3 = 12 Weightage)

Part-C

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

15. Explain Ti plasmid and T - DNA, and various other techniques of gene transfer.
16. Explain DNA sequencing. Explain the different types of sequencing methods.
17. Discuss the methods and applications of genetic fingerprinting.
18. Discuss the applications of Nanotechnology in genetic engineering.

(2 × 5 = 10 Weightage)
