

C 41953

(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, APRIL 2023**

(CBCSS)

Botany

BOT 4E 02-3—GENETIC ENGINEERING

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

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

1. What are codons ?
2. What is the use of loading dye in agarose gel electrophoresis ?
3. Expand the following abbreviations :  
(a) RAMPO; (b) SSCP ; (c) RFLP ; and (d) EST.
4. Name the enzymes used in normal PCR and RT-PCR ?
5. What is gene therapy ?
6. What is plantibody ?
7. What is primer dimer ?

(4 × 2 = 8 weightage)

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

8. What are Restriction enzymes ?
9. Explain the structure of Ti Plasmid ?
10. Give a diagrammatic sketch of Gene Gun.

**Turn over**

11. What are Introns and Exons ?
12. Explain southwestern blotting technique.
13. What is MCS in a cloning vector ?
14. Explain Electroporation.

(4 × 3 = 12 weightage)

### Part C

*Answer any two questions.*

*Each question carries 5 weightage.*

15. Explain Western Blotting in detail.
16. Discuss about chemical methods of gene transfer.
17. Give an account of PCR and its applications.
18. Discuss about application of Nanotechnology in Genetic Engineering.

(2 × 5 = 10 weightage)