

D 70949

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Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE (REGULAR) EXAMINATION
NOVEMBER 2019**

(CUCSS)

General Biotechnology

GB 3C 1—GENETIC ENGINEERING

Time : Three Hours

Maximum : 36 Weightage

Section A

Answer all questions, each with weightage 1.

1. Real time PCR.
2. Blue white screening.
3. Dot blot.
4. Cosmid.
5. RFLP.
6. EST.
7. Restriction modification.
8. Replacement vector.
9. Biolistics.
10. GMOs.

(10 × 1 = 10 weightage)

Section B

*Answer any **seven** questions, each with weightage 2.*

11. Differentiate between cDNA and genomics DNA library formation.
12. What are the characteristic features of expression vectors ?
13. Explain the principle of PCR. What is nested PCR ?
14. Detail the Maxam and Gilbert method of sequencing.
15. Explain plasmid mediated gene delivery in plants.

Turn over

16. Explain the biosafety criteria with regard to genetic engineering.
17. Explain the purification of his-tagged proteins.
18. What is phage display ?
19. Explain the features of pUC 18/19, when used as a cloning vector.
20. Write a note on λ ZAP.

(7 \times 2 = 14 weightage)

Section C

*Answer any **two** questions, each with weightage 6.*

21. Explain the different biochemistries of the next generation sequencing strategies.
22. What are molecular markers ? Explain their role in genome analysis.
23. Detail the different methods of gene delivery in animals.

(2 \times 6 = 12 weightage)