25019646

QP CODE: 25019646

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Fourth Semester

B.Sc Botany Model II Plant Biotechnology

Vocational Course - BO4VOT31 - GENETIC ENGINEERING

2017 Admission Onwards

AF1BDB48

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Give two examples of the methods by which foreign gene can be isolated.
2. Name a technique used for the indirect selection of transformants.
3. What is meant by vector less gene transfer techniques?
4. What is Ti plasmid?
5. What is CaMV?
6. Which enzyme production is regulated in glyphosate resistant transgenic plants?
7. What do yo mean by edible vaccines?
8. Give any two limitations of chromosome walking.
9. What is the use of transposon tagging?
10. What are DNA microarrays?
11. Give any two application of microarray technology in medical field.
12. Which is the human chromosome that contains maximum number of genes?

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Explain transformation and transfection in genetic engineering.
14. Write a note on marker genes.
15. Write a note on golden rice.
16. Briefly discuss the production of flavr savr tomato.
17. Briefly explain how restriction mapping is used in the physical mapping of DNA.
18. Describe in detail the technique of DNA footprinting.
19. Briefly describe the applications of nanobiotechnology.
20. Comment on the ethical issues of recombinant DNA technology.
21. Write a short essay on IPR and patenting.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Explain various gene cloning strategies.
23. Describe Agrobacterium mediated gene transfer.Add a note on Ti plasmid based vectors.
24. Briefly explain the importance of genetically modified crops in agriculture.
25. Write an essay on genomic and cDNA libraries.Add a note on their applications.

(2×10=20)