22100995

QP CODE: 22100995

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, APRIL 2022

Sixth Semester

CORE - BO6CRT12 - BIOTECHNOLOGY AND BIOINFORMATICS

Common for B.Sc Botany Model I, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Horticulture and Nursery Management & B.Sc Botany Model II Plant Biotechnology

2017 Admission Onwards

6BD0D381

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is cell culture?
2. What is the optimum pH range suitable for culturing a plant tissue?
3. What is cell suspension culture?
4. Androgenic haploid plants are usually sterile. Why?
5. Name any two plant cell wall degrading enzymes used in isolation of protoplast.
6. Which enzyme served as molecular glue?
7. Write note on Taq polymerase.
8. Name the enzyme used in DNA sequencing.
9. Expand HEPA.
10. Define proteome.
11. Name the US institute which coordinated Human Genome Project.
12. Expand BLAST.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Comment on the disadvantages of micropropagation.
14. What is shoot tip culture? Write down its significance.
15. Which are the different chemical classes of secondary metabolites?
16. Write a note on the advantages and disadvantages of synthetic seeds.
17. Briefly describe the achievements of rDNA technology in environmental cleaning.
18. Give an account on autoradiography.
19. Explain the scope and applications of bioinformatics.
20. What are bibliographic databases? Explain with an example.
21. What is sequence alignment? Differentiate between local and global alignment.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay on MS medium formulation.
23. Describe the features of different vectors used in genetic modification.
24. Write an essay on Agarose gel electrophoresis.
25. Give a brief account of molecular phylogeny and phylogenetic trees.

(2×10=20)