24000956

QP CODE: 24000956

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

CORE COURSE - 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

A3E98D2F

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is callus?
2. Write down the principle of autoclave.
3. What is micropropagation?
4. What is PEG?
5. What you meant by secondary metabolites?
6. Name any two natural encapsulating gels for cell immobilization.
7. Name any two chemicals used for DNA isolation.
8. Give a short account on Sangers dideoxy method?
9. What is the use of UV light in Laminar airflow chamber?
10. What is functional genomics?
11. Who coined the term bioinformatics?
12. What is PubMed?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. What is shoot tip culture? Write down its significance.
14. What is suspension culture? Differentiate between batch culture and continuous culture.
15. Briefly describe the significance and applications of haploid plants.
16. Comment on polymerase enzymes mediated the synthesis of nucleic acid molecules.
17. Write notes on DNA fingerprinting.
18. Briefly describe the procedure of PCR.
19. Explain sequence analysis using BLAST and FASTA.
20. Explain molecular visualization using RasMol.
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 the composition of a typical nutrient medium.
23. Give an account of different types of cloning vectors.
24. Explain the achievements of recombinant DNA technology.
25. Discuss briefly on human genome project.

(2×10=20)