QP Code: P25C020

Reg. No : .....

Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

III SEMESTER (CBCSS -PG) DEGREE EXAMINATIONS, OCTOBER 2025

M. Sc. Botany

BOT3C09 : BIOTECHNOLOGY AND BIOINFORMATICS

2024 Admission Onwards

Time:3 Hours **Maximum Weightage:30**

Part A

*Short answer type questions. Answer **any four**. Weightage **2** for each questions.*
(4x2 = 8 Weightage)

1. What do you mean by EST searches?
2. Brief the role of molecular docking in drug designing.
3. List out the role of CLUSTAL-W in multiple alignment technique.
4. Differentiate www and http.
5. Explain UniGene and its significance.
6. What are the vector independent methods of gene transfer?
7. List out the micro and macro nutrients used for tissue culture media preparation.

Part B

*Short essay-type questions. Answer **any four**. Weightage **3** for each questions.*
(4x3 = 12 Weightage)

8. Explain the measurement of growth of cells in suspension culture.
9. Differentiate Southern and Northern blotting.
10. Explain the enzymatic method for DNA sequencing.
11. What is a bioreactor? Write down its applications.
12. Explain any 4 vectors used in rDNA technology.
13. What are the biosafety guidelines and regulations for rDNA technology?
14. Evaluate the role of bioinformatics in molecular medicine.

Turn Over

Part C

*Essay-type questions.Answer **any two**. Weightage **5** for each question.*
(2x5 = 10 Weightage)

15. Justify the importance and scope of Bioinformatics.
16. Explain the role of cloning in the creation of transgenic animals.
17. Compare the embryo and ovary culture.
18. How is a transgenic plant developed as a bioreactor? Explain.

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