QP CODE: 25022423

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Reg No : .....

Name : .....

M.Sc DEGREE (CSS) SPECIAL REAPPEARANCE EXAMINATION, APRIL 2025

Third Semester

M.Sc BOTANY

CORE - BY010302 - BIOTECHNOLOGY, BIOINFORMATICS AND BIONANOTECHNOLOGY

2019 ADMISSION ONWARDS

CACF579D

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is the importance of dilution in continuous mode of fermentation?
2. Distinguish between batch and continous culture.
3. What is the importance of liquid culture in plant tissue culture?
4. What is the role of vir F in agrobacterium mediated gene transfer?
5. What is Humulin?
6. What is Reverse transcriptase?
7. What are GMO's?
8. What is meant by dynamic programming algoritm?
9. Write short notes on Cladogram and Phylogram.
10. Write notes on Bottom-up and Top-down synthesis of nanoparticles.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. With the help of a diagram explain air lift fermenter.
12. Give an account on nodal segment culture.
13. With examples explain expression vector.
14. How can an E. coli cell be transformed by electroporation ?
15. Explain the applications of Gene chip technology.

16. Give an account on Genome sequencing strategies.

17. Comment on PubMed and its use in literature survey.

18. Discuss the impact of nanoparticles on various growth parameters in crops and germination and seedling emergence.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain the commercial production of metabolites by microbes.

20. Explain the various methods employed in screening of recombinants.

21. Describe different methods of genome editing.

22. Elaborate on protein structure prediction by citing suitable modelling methods.

(2×5=10 weightage)