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(Printed Pages 3)

(20425)

Roll No. ... Vidushi ...

B.Sc.(Bio-Tech.)-III Year

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Vidushi

B.Sc. (Bio-technology)

Examination, April-2025

Plant Bio-Technology

(B-301)

[B.Sc. (Bio-Tech.)]

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt **any five** questions out of **ten** questions. Each question carries **15** marks.

1. Explain the Shoot tip culture in Micropropagation?
2. Write an essay on the isolation, culture and fusion of plant protoplasts. Discuss the significance of protoplast fusion in plant biotechnology?

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3. Explain the process of Embryogenesis and organogenesis and their application?
 4. Write short notes on any **three**:
 - (a) Hybrid and Cybrid
 - (b) Artificial seeds
 - (c) Suspension culture
 - (d) Haploid culture
 5. What is GM crop? Describe the current status and its regulations?
 6. How can you achieve "embryogenesis" and "organogenesis" in plant tissue culture? Describe the specific nutritional requirements for root and shoot differentiation.
 7. What are the different methods by which genes are directly transferred into plants? Explain how Agrobacterium is used in gene transfer.

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8. Explain the in vitro methods of ovule culture?
9. What is Protoplast isolation? Explain the principle and its application?
10. What is physical gene transfer method? Explain its applications in the Plant Biotechnology?

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