24601

B.Sc. VI Semester Degree Examination, May - 2018

BOTANY

Plant Breeding ; Bio Technology & Tissue Culture

Paper - 6.1

(New)

Time: 3 Hours Maximum Marks : 80

Instructions to Candidates:

1) Answer all the questions

2) Draw diagrams wherever necessary.

I. Answer the following questions : **(15×1=15)**

1. What is BT cotton?
2. Define the term emasculation.
3. What is cDNA library?
4. What are cosmids?
5. Define the term "PCR".
6. What is micro injection?
7. Expand MAC's.
8. Define the term "Slock" in Plant Propagation.
9. What is layering?
10. What are market genes?
11. Define transgene.
12. What is gene cloning?
13. Define tissue culture.
14. What are shuttle vectors?
15. What is callus?

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II. Answer any **FIVE** of the following : **(5×5=25)**

16. List out the significance of plant breeding.
17. Briefly describe the steps involved in the production of recombinant human insulin.
18. Explain the importance of medicinal plants production in plant breeding programme.
19. What is layering? Explain the different types with suitable examples.
20. Explain the different types of cloning vectors in r-DNA technology?
21. Explain the production of BT cotton from genetic engineering method.
22. Explain the schematic representation of callus culture and add a note on organogenesis.

III. Answer any **FOUR** of the following : **(4×10=40)**

23. Explain the Techniques of Hybridisation.
24. Discuss the applications recombinant DNA technology.
25. What is DNA finger printing? Explain the process.
26. Write the applications of Biotechnology in agriculture.
27. Explain the different types of gene transfer methods in plants.
28. Discuss the role of plant tissue culture in increasing food production.