

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

SIXTH SEMESTER – APRIL 2016

PB 6612 – PLANT BIOTECHNOLOGY

Date: 15-04-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer the following, each within 50 words only:

(10x2=20Marks)

1. Define Plant Biotechnology.
2. What is totipotency?
3. Define Somoclonal variation.
4. Mention any two chemofusagent.
5. Distinguish between Ti & Ri Plasmid.
6. Comment on crown gall disease.
7. Write the use of DNA Ligase.
8. What are Cloning Vehicles?
9. Expand RFLP.
10. Mention the importance of DNA Finger printing.

PART – B

Answer the following, each within 500 words only:

(5x7=35 Marks)

Draw diagrams wherever necessary

11. a) Describe the scopes of biotechnology in current scenario.
(Or)
b) Briefly discuss the major applications of plant tissue culture technique.
12. a) Give an account of cryopreservation.
(Or)
b) Describe the method of Embryo culture and its significances.
13. a) Explain the role of Ti Plasmid in gene cloning.
(Or)
b) Explain the post transcriptional and translational modifications in plants.
14. a) What is micropropagation? Mention its stages and explain anyone application of micropropagation.
(Or)
b) Write a short note on Southern Blotting and its applications.
15. a) Explain the importance of molecular markers in crop improvement.
(Or)
b) Highlight genetically modified strategies for insect resistant plants.

PART – C

Answer any **THREE** of the following, each within 1200 words only:

(3x15=45 Marks)

Draw diagrams wherever necessary

16. Biotechnology can greatly promote human welfare. Justify.
17. Explain the molecular mechanism involved in transformation of plants by *Agrobacterium tumefaciens*.
18. Write an essay on Somatic Hybridization.
19. What is r-DNA technology? Explain the steps involved in r-DNA technology.
20. Describe the principle and method of RAPD and comment on its applications.

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