

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

FIFTH SEMESTER – NOVEMBER 2016

PB 5518/5512/5506/6612 – PLANT BIOTECHNOLOGY

Date: 14-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART-A

Answer the following, each within 50 words only:

(10x2=20marks)

1. Define callus
2. Define organ culture
3. List the enzymes used in gene cloning
4. What is an artificial seed?
5. What are *nif* genes?
6. What are Introns?
7. What is electrophoresis?
8. Define cloning vector.
9. What is Western blotting?
10. Comment on cry genes.

PART-B

Answer the following, each within 500 words only:

(5X7=35marks)

Draw diagrams wherever necessary:

11. a. Give an account on phytohormones used in tissue culture.

Or

- b. Describe the methods of sterilization.

12. a. Describe the procedure for embryo culture.

Or

- b. Write short notes on cryopreservation.

13. a. Give an account on chloroplast genome.

Or

- b. Write short notes on cytoplasmic male sterility.

14. a. List the properties of ideal cloning vector.

Or

- b. Write short notes on southern blotting.

15. a. Write the procedure to develop transgenic plant against herbicides.

Or

- b. Write short notes on genomic library.

PART-C

Answer any THREE of the following, each within 1200 words only:
Draw diagrams wherever necessary:

(3X15=45marks)

16. Write an essay on tissue culture media.
17. How will you isolate protoplast from the plant cell? Give the applications of the protoplast culture.
18. Write an essay on *Agrobacterium* mediated gene transfer.
19. Write an essay on polymerase chain reaction.
20. Give a detailed account on molecular markers.
