



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

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

FIFTH SEMESTER – NOVEMBER 2017

**PB 5410 - FORESTRY**

Date: 15-11-2017  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**Part A**

**Answer all the questions.**

10 x 2 = 20 marks

1. Differentiate bactericidal from bacteriostatic activity.
2. What is a surfactant?
3. What is toad stool? How can it differ from edible mushrooms?
4. What are anti staling agents?
5. Mention the role of rennet in cheese production.
6. What are genetically modified plants?
7. Mention any two gene transfer technique in crops.
8. Expand a) EPA b) FDA
9. Write a note on spirulina.
10. What are ethical aspects in food biotechnology?

**Part B**

**Answer any eight questions.**

8 x 5 = 40 marks

11. Enumerate the choices of microorganisms involved in the production of Single Cell Protein.
12. Explain the purpose of using pectinases in fruit juice production.
13. Write a note on broad and narrow spectrum antibacterial.
14. Discuss the food applications of agar and alginate.
15. Write a note on any two fermented vegetable product.
16. Explain the steps involved in rRNA sequencing.
17. What are the benefits of producing genetically modified foods?
18. Write a note on biolistic gene transfer method.
19. Describe the role of USDA in food biotechnology.
20. Explain the importance of algae as a source of nutraceuticals.
21. What are the uses of animal cell culture?
22. Discuss the production of golden rice.

**Part C**

**Answer any four questions.**

4 x 10 = 40 marks

23. Discuss the fermented vegetable product under the following headings

- i) Historical perspective of fermented vegetables (2 marks)
- ii) Potential use of *leuconostoc mesenteroides* and related LAB in the initiation of fermentation process.(4 marks)
- iii) cucumber fermentations – An overview (4 marks)

24. Enumerate the following

- a) Chemical antimicrobials (5marks)
- b) Bacto antimicrobials (5marks)

25. Discuss the enzyme catalyzed modifications in starch hydrolysis.

26. Explain the structure of RNA with the help of a diagram.

27. What is the importance of tissue culture in plant biotechnology? Discuss.

28. Write in detail on the detection methods used to confirm the transgenics?

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