



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – FOOD CHEMISTRY AND FOOD PROCESSING

THIRD SEMESTER – NOVEMBER 2015

BT 3876 - FOOD BIO-TECHNOLOGY

Date : 14/11/2015
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

Part A

Answer the following, each within 50 words

10 x 2 = 20 marks

1. Define secondary metabolite.
2. What is a lanthionine?
3. Define biosurfactants.
4. What is submerged fermentation?
5. List the uses of microbial polysaccharides.
6. What is a codon?
7. Give the reason for browning of explants in tissue culture and how to prevent?
8. Mention any two auxins used in plant tissue culture.
9. What are transgenic animals?
10. Expand a) EPA b) IAA

Part B

Answer any eight of the following, each within 350 words

8 x 5 = 40 marks

11. Write short notes on commercially important fermentation processes.
12. Discuss briefly the process of producing amino acids using fermentation technology.
13. Write short notes on the uses of enzymes in baking industry.
14. Explain the role of microbes in the production of organic acids
15. Outline the cultivation process of mushrooms.
16. Give short notes on microbial surfactants.
17. Describe the structure of DNA with a diagram.
18. Write about the nutritional value of macro algae.
19. Discuss the importance of tissue culture in plant biotechnology.
20. Give a short note on the gene gun method of gene transfer.
21. Briefly explain how genetic engineering has a role in producing transgenic animals.
22. What are the different detection methods of transgenic plants?

Part C

Answer any four of the following, each within 750 words

4 x 10 =40 marks

23. Give a detailed account on transformation of cocoa into chocolate.
24. Write in detail the role of microorganisms in the production of vitamins.
25. Explain in detail the role of enzymology in fruit and vegetable industry.
26. Ennumerate and explain the different applications of animal cell culture.
27. Write notes on the following a) DNA microinjection b) Ethical and environmental safety issues concerning genetically modified foods.
28. Explain the β -carotene pathway in production of golden rice.
