



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SECOND SEMESTER – NOVEMBER 2016

FP 2953 - FUNCTIONAL FOODS AND NUTRACEUTICALS

Date: 14-11-2016
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

Part A

Answer ALL THE questions.

10 x 2 = 20 marks

1. Define functional foods
2. State any three requirements for a functional food to acquire a health claim.
3. Mention the categories of functional foods.
4. Expand GMP and HACCP
5. List the foods rich in carotenoids.
6. Mention the bioactive components present in Indian spices.
7. What are the different market forms of nutraceuticals?
8. Define nutrigenomics.
9. What are transgenic plants?
10. List the hormones produced using recombinant technology.

Part B

Answer ANY EIGHT questions.

8 x 5 = 40 marks

11. Bring out the relationship between food, nutrition, health and disease.
12. Define health claims. Classify health claims based on the level of scientific evidence
13. Highlight the health benefits of edible algae as nutraceutical rich supplements.
14. Give the bioactive components in Garlic and its implications on health.
15. Discuss the effect of ω -3 fish oils on lipoprotein metabolism and their role in heart disease.
16. Explain briefly the functions of carotenoids and give its biological functions.
17. Write short notes on the regulatory issues of nutraceuticals.
18. Discuss the phytochemical class which provides the predominant source of coloring for fruits or vegetables.
19. Write short notes on plant made pharmaceuticals.
20. Bring out the important analytical methods used for the analysis of rDNA products
21. What are the gastrointestinal challenges for stability and efficacy of functional foods.
22. Write short notes on polyphenols present in foods.

Part C

Answer any four questions.

4x10 = 40 marks

23. Give in detail the classification of nutraceuticals based on plant and animal sources
24. Describe in detail the process of extraction, isolation and characterization of a bioactive compound in functional food.
25. Discuss in detail about probiotics and probiotic products available in the market.
26. Explain the relationship between nutritional supplements and gene expression in preventing diseases.
27. Explain the health benefits of the bioactive components present in
 - i. ALA
 - ii. Short chain fatty acids
 - iii. Phytosterols
28. Describe the production technology involved in recombinant therapeutic human insulin using E.coli.
