



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SECOND SEMESTER – APRIL 2018

17/16 PFP2ES01- FUNCTIONAL FOODS AND NUTRACEUTICALS

Date: 25-04-2018
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

Part A

Answer ALL THE questions.

10 x 2 = 20 marks

1. Define structure health claim.
2. List the nutraceutical substances from microbial source.
3. Mention the minerals that have nutraceutical potential.
4. Name the non-chromatographic techniques used in isolation of bioactive components.
5. What are the principal soy isoflavones and what hormone in the body are they similar to?
6. Why is flaxseed considered both a nutraceutical and a functional food?
7. Enlist the therapeutic role of quercetin in preventing diseases.
8. What is the physiological role and common adverse effects of melatonin?
9. What do you understand by the term metabolomics?
10. Define Meta analysis and systemic reviews.

Part B

Answer ANY EIGHT questions.

8 x 5 = 40 marks

11. Bring out the relationship between food, nutrition, health and disease.
12. Discuss the functional food categories of functional foods with suitable examples.
13. Highlight the primary steps to utilize the biologically active compound from plant source.
14. Explain the role of glucosinolates as a potential source of nutraceutical.
15. What are the significant functions of the nutraceutical substances from animal sources?
16. Discuss i) Factors enhancing the bioavailability of lycopene.
ii) Properties and health benefits of the polyphenol identified in the leaves, skins and petals of *Vitis vinifera*, in wines and grape juice.
17. Outline the metabolic pathway of n-3 and n-6 PUFA as precursors for the formation of prostaglandins and also give your comments on maintaining the ratio between n-3: n-6 PUFA.
18. Write short notes on creatine as a nutraceutical.
19. Mention the efficacy of functional foods and nutraceuticals in mental health.
20. Elucidate the role of functional foods and nutraceuticals in weight management.
21. Write short notes on adverse effects of nutraceuticals
22. Explain the advantages, disadvantages and future of Meta analysis.

Part C

Answer ANY FOUR questions.

4x10 = 40 marks

23. Explain in detail the health claims that meet significant scientific agreements with suitable illustration.
24. Define nutraceuticals and explain in detail the organizational classification of nutraceuticals based on its chemical nature.
25. Describe in detail the chromatographic methods used in the identification and characterization of bioactive components.
26. Elaborate on tea as a functional food.
27. Write a detailed note on therapeutic applications of functional foods and nutraceuticals in cancer prevention.
28. Discuss in detail the various beneficial and antagonistic drug-nutraceutical interactions.

\$\$\$\$\$\$\$\$