



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – CHEMISTRY

SECOND SEMESTER – APRIL 2018

17/16PCH2ES01- BIOMOLECULES AND NATURAL PRODUCTS

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

Dept. No.

Max. : 100 Marks

Part-A

Answer ALL questions.

(10 × 2 = 20)

1. What is saponification?
2. What are surfactants?
3. Expand the given abbreviations: PFA and FPO
4. Mention the common adulterants found in milk and edible oil.
5. What is AGMARK? What are its objectives?
6. Draw the molecular structure of sucrose.
7. Give examples for non-essential amino acids.
8. Draw the molecular structure of starch.
9. What are preservatives? Mention their role in food industries.
10. What do you understand by the term food pyramid?

Part B

Answer any EIGHT questions.

(8 x 5 = 40)

11. Discuss the contamination of food with toxic chemicals, pesticides and insecticides.
12. Enumerate the beneficial effects of microorganisms
13. Give an account on the applications of ionic and non-ionic detergents
14. How are soaps classified? Mention the different types of soaps.
15. What are hair conditioners? What are the BIS specifications for a hair dye?
16. Discuss the chemical composition of nail polish, nail polish removers and eyebrow pencils.
17. Write short notes on the following
 - a) food additives
 - b) food colors.
18. What are artificial sweeteners? Discuss briefly their role in food industries.
19. Discuss in detail the calorific value of food stuff.
20.
 - a) Write a short note on nutritional value of carbohydrates.
 - b) Give the composition of soft drinks.
21. What are non enzymatic browning reactions?
22. What are modern foods? Explain in detail the different types of modern foods.

Part C

Answer any **FOUR** questions

(4 x 10 = 40)

- 23a. Discuss any two methods of manufacturing of soaps. (7)
b. Write a short note on skin slowing materials. (3)
- 24a. Provide a comparative account of soaps and detergents. (4)
b. Discuss the contamination of food with toxic chemicals. (6)
- 25a. List down the different modes of cooking. (7)
b. Write a short note on balanced food. (3)
- 26a. Write a note on emulsions and emulsifiers. Explain the terms. (3)
b. Write the sources, functions and importance of fat soluble vitamins. (7)
- 27a. State the sources, functions, bioavailability and deficiency of minerals as constituent of food. (7)
b. Write a short note on fortification. (3)
28. Write a short note on the following:
a) alcoholic beverages b) preservation of tetrapack c) coconut water. (4+3+3)

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