



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

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

FOURTH SEMESTER – APRIL 2018

**FP 4806- CHEMISTRY OF FOOD ADDITIVES**

Date: 07-05-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**Part A**

**Answer all the questions.**

10 x 2 = 20 marks

1. What is meant by intentional additives?
2. Mention the role of Benzoic acid as food additives.
3. What are flavour enhancers? Give one example.
4. Define Noot ketone.
5. List some artificial sweeteners that are commercially available. Write its chemical composition.
6. What are pH control agents?
7. Give the structure of saccharin. How well it fits with AH-B theory for elucidating sweet taste modality?
8. What are leavening agents?
9. Mention the role of anti caking agent, as an additive.
10. Gas production is independent of flour strength but when the strength is increased retention is also increased. Justify the statement.

**Answer any eight questions.**

8 x 5 = 40 marks

11. Discuss the role of lipoic acid as a food preservative.
12. Enumerate the advantages of using citric acid as a preservative agent.
13. What is meant by Gas production and Gas retention capacity? How can it affect shelf life of baked products?
14. Discuss the role of non - nutritive sweetener in food preservation.
15. Describe the generation of volatile compounds involved in generation of fish flavor.
16. Explain the functions of chemical leavening agents towards improving baking quality.
17. Elaborate on the use of sulphite as a food preservative.
18. Brief the role of Aspartame as a artificial sweetener, with its metabolic generations of by products in the human system.
19. Explain the following antioxidants
  - i) THBQ (2.5)
  - ii) Ascorbic acid (2.5)
20. Comment on the activity analysis of yeast cells.
21. Enumerate the flavors generated from lactic acid.
22. Write a note on thermally induced flavors.

**Part C**

**Answer any four questions.**

4 x 10 =40 marks

23. Write a detailed account on the influence of pH and enzymic metallic complex formation with respect to chlorophyll containing pigments.
24. Discuss the biosynthesis of Tomato flavour.
25. Explain the following extraction procedure:
  - i) Carotenes
  - ii) Chlorophyll
26. Write a detailed note on generation and causes of free radicals formation. How are antioxidants used to sustain the shelf life of such foods? Explain it in suitable examples.
27. Enumerate the effect of pH, heat and light in processing betalain containing pigments.
28. Write a note on the following
  - i) anti caking agents
  - ii) prevention of mold in baked goods by the influence of gas productive and retention effects.

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