



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – NOVEMBER 2016

FP 3807 - AGRO PRODUCTS AND PROCESSING

Date: 01-11-2016
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

Part A

Answer all the questions.

10 x 2 = 20 marks

1. What are the two design principles of the cleaning system of cereal grains?
2. List any four wheat grains “not fit” for milling operation.
3. What is the compositional difference of bran and germ in a cereal grain?
4. Differentiate between baking powder and baking soda.
5. Present the reactions involved in the mechanism of ripening of fruits.
6. List any four methods of eliminating the toxic constituents present in pulses.
7. Expand the term “RBD” in the processing of oils and fats .
8. What is “deodorizing” and “degumming” in oil extraction?
9. What is blackstrap molasses in sugarcane processing?
10. Give any two differences between climacteric and non- climacteric fruits.

Part B

Answer any eight questions.

8 x 5 = 40 marks

11. What are the techniques employed in grain separation based on their shape?
12. Diagrammatically represent a wheat grain and label its parts.
13. Write a brief note on the heat exchangers used in the food industry.
14. Write a note on the nutritional significance of Pseudocereals.
15. Write a brief note on the types of rancidity in fats and oils.
16. Write short notes on the following:
 - A. Winterization
 - B. Plasticizing
17. Briefly explain the different quality measurements used to evaluate the fruit post-harvest.
18. Write a brief note on the preparation and testing methods adopted in the manufacture of jams and marmalades.
19. Explain any two chemical testing methods to assess the deterioration of fats and oils.
20. Write short notes on the manufacturing process of beer.
21. Explain briefly the three common operations in the early processing of fruits and vegetables.
22. What are the types of sugar used in baking? Explain its effect in the baking process.

Part C

Answer any four questions.

4 x 10 = 40 marks

23. Discuss the following unit operations in a food manufacturing plant:
 - A. Membrane processes
 - B. Raw Material handling
24. Enumerate the various stages employed in the making of bread. Give any two suggestions in improving the nutritional and keeping quality of bread.
25. Discuss the various antinutritional and toxic factors present in pulses.
26. Explain the process of oil refining techniques after the extraction from the oilseeds.
27. Explain the process involved in the conversion of cacao beans to chocolate with a suitable flowchart.
28. Explain the manufacturing of wine giving an account on the yeast utilized in the process.
