

18. Provide detailed examples of mixing, extraction, filtration, centrifugation and membrane separation and their applications, significance of in the food industry.
 19. Investigate low-temperature storage, particularly freezing, and its impact on food quality. Discuss the factors that affect the quality of frozen foods and how these can be controlled to maintain product quality.
 20. Explain the manufacturing of vegetable and fruit products, including the preservation methods used, the impact of processing on product quality.
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S.No. 6129

P 16 BT 42

(For candidates admitted from 2016–2021 batch)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Biotechnology

FOOD TECHNOLOGY

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

I. Define the following :

1. Additives.
2. Enzymes.
3. Pathogens.
4. Spoilage.
5. Crystallization.
6. Emulsification.
7. Blanching.
8. Canning.
9. Beverages.
10. Edible Oils.

PART B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain the role of proteins in food chemistry and how they contribute to the texture of food products.

Or

- (b) Discuss the significance of flavor in food and how flavor compounds are formed and enhanced in food products.

12. (a) Differentiate between food borne infections and food borne intoxications. Provide examples of each.

Or

- (b) Discuss the common causes of food spoilage and their effects on food quality and safety.

13. (a) Explain the importance of cleaning, sorting, and grading in the food processing industry.

Or

- (b) Discuss the principles of heat processing in food preservation and how it impacts the quality and safety of processed foods.

14. (a) Analyze the use of irradiation as a food preservation method and its impact on food safety and quality.

Or

- (b) Explain preservation methods, sterilization, and pasteurization, with regard to their applications in the food industry.

15. (a) Discuss the processing of milk to produce various dairy products such as butter and ice cream.

Or

- (b) Provide an overview of the production of meat, poultry, and fish products, including meat processing techniques and quality control measures.

PART C — (3 × 10 = 30)

Answer any THREE questions.

16. Explore the role of enzymes in food processing, highlighting their applications in various food industries. Provide specific examples and discuss the benefits of using enzymes in food production.
17. Give a brief account on the microorganisms in food, both beneficial and harmful, and their impact on food quality and safety.