

**ASSIGNMENT SET - II****Department of Nutrition****Mugberia Gangadhar Mahavidyalaya****M.VOC(FTNM):****Semester-I****Paper Code:FTNM11****Answer all the questions**

1. How does solar drying work, and what are its advantages and limitations?
2. Compare solar drying to other methods of food dehydration.
3. What types of foods are best suited for solar drying?
4. Explain the role of pH in pickling.
5. Why is acidity crucial in pickled products? b. How does the pH level affect the safety and flavor of pickled foods? c. Provide examples of pickling spices and their functions.
6. Describe the principle behind vacuum packaging for food preservation. What are the benefits of vacuum packaging in terms of shelf life and quality?
7. Discuss situations where vacuum packaging might not be suitable.
8. What is food irradiation, and how does it help in food preservation?
9. Address common misconceptions or concerns about irradiated foods.
10. Name a few countries where food irradiation is widely practiced.
11. How does sugar contribute to the preservation of jams and jellies? Discuss the role of salt in various preservation methods, such as curing. Can excessive use of sugar or salt pose health risks in preserved foods?
12. Provide examples of commonly used chemical preservatives in food.
13. Discuss the advantages and disadvantages of using chemical preservatives.
14. How can consumers make informed choices regarding foods with added preservatives?
15. Identify potential challenges that individuals may face when preserving food at home.
16. How can these challenges be mitigated to ensure safe and effective preservation?
17. Discuss the importance of following tested recipes in home food preservation.
18. Explore traditional or indigenous methods of food preservation in different cultures.
19. How do these methods reflect the local environment and available resources?
20. Are there any modern adaptations or improvements to these traditional methods?

21. Explain the importance of preventing cross-contamination during food preservation.
22. What measures can be taken to avoid cross-contamination in a home kitchen?
23. Discuss the impact of cross-contamination on the safety of preserved foods.

## **UNIT-2**

1. Explain the principles of cryogenic freezing and its applications in the food industry.
2. Discuss the advantages and challenges associated with the use of cryogenic freezing.
3. Explain the mechanisms of spray drying and fluidized bed drying.
4. Discuss the advantages and limitations of each method in preserving the quality of dried foods.
5. Describe the freeze-drying process and its applications in food preservation.
6. How does a solar drier harness natural energy for food drying, and what are its benefits in sustainable food preservation?

### **UNIT-3**

1. Explain how food colourings and flavour enhancers impact the sensory attributes of food.
2. Provide examples of natural and synthetic colourings and flavour enhancers.
3. Discuss the potential health concerns associated with excessive consumption of certain colourings or flavour enhancers.
4. Explain the regulatory procedures and agencies responsible for approving and monitoring food additives.
5. What criteria are considered when determining the safety of a new food additive?
6. Discuss any recent changes or updates in food additive regulations.
7. Evaluate the role of consumer education in promoting awareness of food additives.
8. How can food manufacturers transparently communicate information about additives to consumers?
9. Discuss the impact of social media and online platforms on shaping consumer perceptions of food additives.

## UNIT-4

1. Differentiate between dry milling and wet milling in maize processing.
2. Discuss the applications of maize starch and gluten in the food industry.
3. How does the milling process impact the end-use properties of maize products?
4. Explain the malting process in barley and its significance.
5. Discuss the milling techniques employed in processing malted barley.
6. Explore the diverse applications of barley-based products.
7. Highlight the importance of millets in human nutrition.
8. Discuss the processing methods for millets and their applications.
9. Explore the challenges and opportunities in promoting millets for food use.
10. Classify different types of legumes based on botanical characteristics.
11. Discuss the nutritional composition of legumes and their significance in a balanced diet.
12. Identify common anti-nutritional compounds present in legumes.
13. Discuss the health implications of anti-nutritional factors and methods to reduce their content.
14. Compare and contrast home scale, cottage scale, and modern milling methods for legumes.
15. Evaluate the factors influencing the efficiency and quality of legume milling.
16. Discuss the rationale behind the enrichment of cereals and pulses.
17. Explore different methods of fortifying cereal and pulse-based products.
18. Evaluate the challenges and benefits associated with enrichment.
19. Identify key quality parameters in the processing of cereals and pulses.
20. Discuss the role of these parameters in determining the final product quality.
21. Explore methods for quality control and assurance in processing facilities.
22. Highlight recent innovations in cereal and pulse processing technologies.
23. Discuss the potential impact of these innovations on efficiency, sustainability, and product quality.
24. Identify common byproducts generated in cereal and pulse processing.
25. Discuss sustainable approaches for the utilization and value addition of these byproducts.

## UNIT-5

1. Discuss key quality parameters in milk production, emphasizing factors that influence milk quality.
2. How does adherence to quality standards contribute to the overall safety of milk and dairy products?
3. Outline the steps involved in milk reception at a dairy processing unit.
4. Discuss the significance of milk testing, including tests for fat content, acidity, and microbial load.
5. Explain the purpose and process of homogenization in milk processing.
6. Discuss the principles of pasteurization and its importance in ensuring milk safety.
7. Compare and contrast UHT treatment with traditional pasteurization methods.
8. Discuss the advantages and challenges associated with UHT-treated milk.
9. Explain the fermentation process in the production of dahi and yoghurt.
10. Discuss variations in the production of different cultured dairy products, including factors influencing flavor and texture.
11. Detail the steps involved in butter production, including cream separation and churning.
12. Discuss the differences between butter and ghee, including their production methods.
13. Describe the manufacturing process of ice cream, including the role of stabilizers and emulsifiers.
14. Discuss factors influencing the sensory attributes and texture of ice cream.
15. Compare traditional and modern techniques in cheese production.
16. Discuss the aging and ripening processes that contribute to the flavor and texture of different cheeses.
17. Explain the processes involved in the production of condensed milk.
18. Discuss the methods used in drying milk and the applications of dried milk products.
19. Discuss the considerations and technological aspects in the production of infant milk food.
20. Address the importance of safety and nutritional content in infant milk food products.
21. Explain the concept of CIP in dairy processing.
22. Discuss the benefits and challenges associated with CIP techniques.

## UNIT-6

1. Explain the principles behind meat grading and its importance in the meat industry.
2. Discuss the factors considered in the grading of meat, such as marbling and tenderness.

3. Describe the process of curing meat and its applications.
4. Discuss smoking techniques in meat processing and how they contribute to flavor and preservation.
5. Explore emerging trends in meat products, such as plant-based alternatives and cultured meat.
6. Discuss the impact of these trends on the traditional meat processing industry.
7. Compare the processing techniques for waterfowl and game birds to those of traditional poultry.
8. Discuss the unique challenges and considerations in processing these types of poultry.
9. Explain the importance of marination in enhancing the flavor and tenderness of poultry products.
10. Discuss different marination techniques and their effects on poultry meat.
11. Outline the key parameters for quality control in fish processing.
12. Discuss the role of HACCP (Hazard Analysis Critical Control Point) in ensuring the safety of fish products.
13. Provide examples of innovative fish products and processing methods.
14. Discuss how consumer demand for sustainable and value-added fish products is driving innovation.
15. Explain the process of pasteurizing egg products and its importance in food safety.
16. Discuss the various applications of pasteurized egg products in the food industry.
17. Compare the processing techniques for egg whites and egg yolks.
18. Discuss the different applications and nutritional profiles of egg white and egg yolk products

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