



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR  
SECOND YEAR SECOND TRIMESTER**

**SCHOOL OF PURE, APPLIED AND HEALTH SCIENCES  
BACHELOR OF SCIENCE IN FOODS, NUTRITION, AND  
DIETETICS**

**COURSE CODE: FND 2229**

**COURSE TITLE: PRINCIPLES OF FOOD PROCESSING,  
PRESERVATION AND STORAGE**

**DATE: 15<sup>TH</sup> APRIL, 2024**

**TIME: 0830-1130**

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**INSTRUCTION TO CANDIDATES**

**Section A: Multiple Choice Questions. Answer ALL Questions**

**Section B: Short Answer Questions. Answer ALL Questions**

**Section C: Long Answer Questions. Answer Question ONE and any other ONE question.**

*This paper consists of 6 printed pages. Please turn over.*

**SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS) SELECT THE CORRECT**

**ANSWER.**

1. What is the main role of gelatin in ice cream?
  - A. Get a soft texture
  - B. Flavoring
  - C. Sweetening
  - D. preservation
2. Radiation activity is measured in SI unit called?
  - A. Becquerel
  - B. Curie
  - C. Gray
  - D. Kilocalorie
3. What is the most common food preservation method?
  - A. Freezing
  - B. Fermentation
  - C. Heating
  - D. Freeze drying
4. Fermentation of glycerol in wine results in?
  - A. Pousse.
  - B. Amertume.
  - C. Mousy flavor.
  - D. Tourne.
5. Use of different methods like temperature (high or low), control of acidity, control of water activity for preservation of food is known as?
  - A. Hurdle technology
  - B. Mixed technology
  - C. Stumbling technology
  - D. Multiple technology
6. Which of the following is the process of converting sugar into alcohol?
  - A. Oxidation
  - B. Bleaching
  - C. Pasteurization
  - D. Fermentation
7. Organic acids used in food preservation include?
  - A. Hydrochloric acid
  - B. Sulphuric acid
  - C. Boric acid

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- D. Sorbic acid
- 8. Benzoic acid is mostly used to preserve colored foods because?
  - A. It may darken the product
  - B. It may lighten the product
  - C. It bleaches
  - D. It has an aroma
- 9. A method of drying in which the moisture of the product is frozen to solid and then sublimates to vapor under vacuum is called?
  - A. Sun-drying
  - B. Lyophilization
  - C. Spray drying
  - D. Drum-drying
- 10. Pasteurization is the process of heating milk,
  - A. Above 121 degrees
  - B. Above 150 degree
  - C. Above boiling point
  - D. Below boiling point
- 11. Cold sterilization refers to preservation of food by?
  - A. Refrigeration
  - B. Radiation
  - C. Dehydration
  - D. Lyophilization
- 12. All the following are household preservation techniques EXCEPT?
  - A. Smoking
  - B. Dehydration
  - C. Lyophilization
  - D. Salting
- 13. What is the purpose for blanching vegetables before canning?
  - A. To soften products to fill better
  - B. To denature enzymes
  - C. To reduce microbial population
  - D. All of the above
- 14. Who is regarded as the father of canning?
  - A. Nicolas Appert
  - B. Louis Pasteur
  - C. John Hall
  - D. Charles Darwin

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15. Which of the following methods dehydrates microbial cells by plasmolysis hence kill them?
- A. Sugaring
  - B. Smoking
  - C. Heating
  - D. Pasteurization
16. Which of the following is a factor that affects the storage stability of food?
- A. Type of raw material used
  - B. Quality of raw material used
  - C. Method/effectiveness of packaging
  - D. All of the mentioned
17. Which of the following sentence is true with respect to food storage/preservation?
- A. Each food type has a potential storage life
  - B. The mechanical abuse that food has received during storage/distribution does not affects its storage stability
  - C. All of the mentioned
  - D. None of the mentioned
18. Choose the true statement.
- A. Food storage and preservation is observed to be better/easier in parts of the world that have civilizations prevalent there
  - B. Proteins are held in an emulsion state in a water system
  - C. Fats are in colloidal state
  - D. Food preservation causes cancer
19. Statement 1: Foods of plant origin can be used as additives for food preservation.  
Statement 2: Dry fruits and seeds are the most important higher plant structures used as food.
- A. True, False
  - B. True, True
  - C. False, False
  - D. False, True
20. Statement 1: Majority of the fish have more proteins than water.  
Statement 2: Whole milk has more water than fat.
- A. True, False
  - B. True, True
  - C. False, False
  - D. False, True

**SECTION B: SHORT ANSWER QUESTIONS (40 MARKS). ANSWER ALL QUESTIONS.**

1. What are the causes of food spoilage? 5 marks.
2. Describe at least 4 measures for preventing food spoilage. 4 marks
3. There are different curing methods, each with its own unique benefits. Name 4. (4 marks)
4. Write short notes on fermentation. 6 marks
5. Explain the key principles of drying as a method of food preservation. 4 marks.
6. What are the functions of food additives? 6 marks.
7. Write short notes on food packaging. 6 marks.
8. What are the advantages of HTST pasteurization of milk? 5 marks.

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**SECTION C: LONG ANSWER QUESTIONS (40 MARKS).QUESTION ONE IS  
COMPULSORY, THEN CHOOSE EITHER QUESTION 2 OR 3.**

1. Discuss the different methods of drying. 20 marks.
2. Write an essay of pasteurization as a modern method of food preservation. 20 marks.
3. There are many types of food additives available. List and explain 10 of them. 20 marks.