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B.Tech. (Food Technology) (Sem.-3)
PRINCIPLES OF FOOD PRESERVATION
Subject Code : BTFT-301
M.Code : 76989

Max. Marks : 60

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

1. Write briefly :

- A) What is the various unit operation involved in the process of canning?
- B) What do you understand from the term F value?
- C) Write down the application of different bacteriocins in food products.
- D) Write down the principle on which intermediate moisture foods based.
- E) What is the importance of moisture content and water activity (a_w) in food preservation?
- F) What is the purpose to study the food sorption isotherms?
- G) What are the beneficial effects of modified and controlled atmosphere storage?
- H) How do you classify the foods on the basis of pH?
- I) What is the reason of formation of large ice crystals during slow freezing?
- J) Name the tests which are commonly used to determine blanching success.

SECTION-B

2. A) How are D-value and Z-value determined for a thermal process? What is the 12-D process?
B) What are the advantages of Reverse Osmosis concentration over evaporative concentration? Write down the application of reverse osmosis in fruit juice Industry.
3. A) What are the preservatives used in fruit juices? Write down their mode of action also.
B) What is the concept of triple point in freeze drying process? Write in short about the lyophilization equipment.
4. A) Write down the various factors which are responsible for food spoilage.
B) What is controlled atmosphere storage? How is this technique helpful in preservation of fruits and vegetables?
5. A) What is difference in pasteurization and sterilization? Differentiate in the working of LTLT and HTST pasteurizer.
B) What is drying curve? How are the Psychometric Charts helpful in various calculations in drying process?
6. A) Write about the physical spoilages in different food products.
B) Write about the air blast freezers.

SECTION-C

7. A) What are Scrubbers? What is the role of these scrubbers in controlled atmosphere storage?
B) Write about the various spoilages in canned foods. How are these spoilages prevented?
8. A) Write about the principle and working of triple affect evaporator.
B) What are the various chemical and microbial spoilages occur in Fish and Fish Products?
9. A) Write down the mechanism of action of sodium nitrate as preservative in meat products. What is the various health concerns related to its use in meat products.
B) Explain the various bio preservatives used in the preservation of foods.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.