

Roll No.....

2024
2nd Sem

M.Tech Food Technology
Semester I Examination, 2024
Paper Title: Food Processing and Preservation
Paper Code: MFTC – 102

Time: 3 Hours

Max Marks 60

Attempt all questions. Marks are mentioned against each question.

Section A

1. Specify the correct answer (1 x 12)

- (a) Who is the union cabinet minister for MoFPI?
(i) Narendra Singh Tomar (ii) Harsimrat Kaur Badal
(iii) Sh. Pashupati K Paras (iv) None of these
- (b) Which of the following is a non-thermal food preservation technique?
(i) retorting (ii) blanching
(iii) cold plasma (iv) pasteurization
- (c) Which of the following is not an example of modified atmosphere packaging,
(i) CAS (ii) passive MAP
(iii) nitrogen flushing (iv) active packaging
- (d) In freezing preservation, the slower rate of freezing results into formation of
(i) larger crystals (ii) smaller crystals
(iii) very large crystals (iv) no crystal

Fill in the blanks

- (e) _____ is another term used for canning.
- (f) The characteristic golden brown color associated with baked foods is due to _____ and _____.
- (g) The temperature at which a crystal of an individual solute exists in equilibrium with the unfrozen liquor and ice is its _____.
- (h) _____ and _____ are two frequencies that have been set aside for exclusive use of microwave heating applications.

State true or false

- (i) Examples of hurdles in food processing are pH, relative humidity, oxygen and temperature.
- (j) The supercritical region for carbon dioxide is when it is above the critical pressure of 74 bar and the critical temperature of 31 °C.
- (k) Processing technology in which an AC current is passed through a food sample which leads to generate internal energy and heating patterns is termed as ohmic heating.

- (l) High pressure processing is also termed as appertization.

Section B

Answer any four of the following

(6 x 4)

- Q.2 Discuss the scope of food processing in India. Briefly discuss any 2 preservation methods suitable for India.
- Q.3 Discuss the principle of irradiation treatment of foods.
- Q.4 Justify the statement, "Flash freezing is a better than slow freezing for foods".
- Q.5 Discuss the applications of dielectric heating in foods.
- Q.6 Freshly harvested cherries from Shimla need to be transported to Bengaluru. What technology do you suggest can be helpful in keeping the freshness of cherries until it reaches the destination/consumer.

Section C

Answer any two of the following

(12 x 2)

- Q.7 Maria is allergic to caffeine. What according to you is the most suitable technology for decaffeination of coffee? What is its principle? Also, discuss its other applications.
- Q.8 What is the principle of membrane processing in the food industry? What are the types of membrane processing and its applications in detail?
- Q.9 Write short notes on the following:
- a. Pulsed Light Treatment
 - b. Nanotechnology
 - c. Ultrasonication

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CO Mapping

Set 1

	Section A	Section B	Section C
Q 1a-d	CO 1,2,2,2		
e-h	CO 2,2,2,4		
i-l	CO 5,4,4,5		
Q 2-6		CO 1,2,2,4,5	
Q 7-9			CO 5,4,3