



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024  
Programme – B.Sc.(BT)-Hons-2023  
Course Name – Food Technology  
Course Code - BBT10002  
( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Cite the fact that is correct with respect to the food preservation industry
- |   |   |
|---|---|
| a) Majority of high quality foods in the world are the highly perishable food items   | b) More people with more than adequate standard of living exist and hence the demand for safe preserved food is growing |
| c) Food preservation market is going to boom as more people are shifting to areas where there is more industrial growth and hence they expect a better standard of living which includes safer food | d) All of the mentioned   |
- (ii) Which method of food preservation involves heating food to a high temperature and then sealing it in airtight containers?
- |                  |                |
|------------------|----------------|
| a) Freeze-drying | b) Canning     |
| c) Fermentation  | d) Dehydration |
- (iii) 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 |
- (iv) The enzyme which breaks down carbohydrate
- |            |                      |
|------------|----------------------|
| a) Lipase  | b) Protenase         |
| c) Amylase | d) None of the above |
- (v) Which nutrient helps in the activation of alcohol dehydrogenase?
- |              |              |
|--------------|--------------|
| a) Zinc      | b) Iron      |
| c) Magnesium | d) Manganese |
- (vi) Which vitamin is a cofactor in oxidative decarboxylation of  $\alpha$ -keto acids?
- |           |               |
|-----------|---------------|
| a) Biotin | b) Riboflavin |
| c) Niacin | d) Thymine    |

- (vii) Identify the disease which occur due to malnutrition
- a) Marasmus  
b) Kwashiorkor  
c) Both of the above  
d) None of the above
- (viii) Which type of amino acids cannot be synthesized by the body and must be obtained from the diet?
- a) Essential Amino Acids  
b) Non essential amino acids  
c) Conditionally Essential Amino Acids  
d) All amino acids can be synthesized by the body
- (ix) Name a disease caused by deficiency of Vitamin B1`
- a) Pellagra  
b) Beriberi  
c) Anemia  
d) None of the above
- (x) Select which vitamin acts as the most important antioxidant in the body
- a) Vitamin A  
b) Vitamin B6  
c) Vitamin C  
d) Vitamin B12
- (xi) Which Indian authority is responsible for setting quality standards for vegetable products?
- a) FSSAI (Food Safety and Standards Authority of India)  
b) Ministry of Agriculture and Farmers Welfare  
c) Ministry of Commerce and Industry  
d) Ministry of Food Processing Industries
- (xii) Select which of the following practices is a key principle of organic agriculture?
- a) Monoculture  
b) Crop rotation and polyculture  
c) Excessive irrigation  
d) Genetic modification
- (xiii) In a bakery, which of the following methods would you recommend for improving the shelf life of freshly baked goods
- a) Increasing the sugar content  
b) Decreasing the baking temperature  
c) Using preservatives like calcium propionate  
d) Adding more liquid to the dough
- (xiv) If a farmer suspects an outbreak of a contagious animal disease, what is the appropriate biosecurity action?
- a) Continue regular farming activities  
b) Quarantine the affected animals, restrict movement, and report the outbreak to authorities  
c) Increase the use of antibiotics  
d) Relocate the animals to a different farm
- (xv) Name the key microorganism for yogurt is
- a) Streptococcus thermophilus  
b) Leuconostoc citrovorum  
c) Lactobacillus acidophilus  
d) Streptococcus lactis

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain the importance of hop additions during the brewing process. (3)
3. What are the essential and non-essential vitamins? Give examples of three vitamins for each category (3)
4. Write the function of State Food Safety Commissioners and Food Safety Officers (FSOs) in the state level administrative set up (3)
5. Give examples of three fatty fish high in omega-3 fatty acids. (3)
6. Summarize the different types of bacteriocin in food preservation (3)

OR

Summarize the roles of O3 & H2O2 as food sanitisers (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the State level Administrative Setup of FSSAI (5)
8. Describe the occurrence and deficiency disease of the following minerals. Iodine, Selenium, Fluoride, Manganese, Chromium (5)
9. Write a note on food preservation through use of radiation. (5)
10. How do different types of rice differ nutritionally? Discuss their cultural significance in various regions. (5)
11. Could you provide a detailed explanation of the process of extracting oil from sunflower seeds, including its techniques and applications? (5)
12. Explain the advantages and disadvantages of chemical preservation in comparison to other methods like thermal treatments and dehydration (5)

**OR**

Illustrate the principle behind the process of dehydration in food preservation. Provide an example of a food item commonly preserved through dehydration (5)

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