

- Q.20 Describe the process of producing distilled beverages like whiskey, rum, and primary spirits through fermentation.
- Q.21 Explain the key steps involved in the production of wine through fermentation.
- Q.22 Outline the brewing process of beer, highlighting the main stages and ingredients used.

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**3rd Sem / Food Technology**  
**Subject : Food Fermentation Technology**

Time : 3 Hrs.

M.M. : 60

**SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 In detail, explain the basic configuration of a fermentor, including its various components. Discuss the functions of each components and their roles in the fermentation process.
- Q.24 Describe the importance of maintaining pure cultures in food fermentation. Outline the procedures involved in maintaining and propagating pure cultures.
- Q.25 Describe the entire process of wine production through fermentation. Include details about grape selection, fermentation stages, and aging.

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 What is food fermentation ?  
 a) The process of cooking food with heat  
 b) The process of preserving food with chemicals  
 c) The process of converting carbohydrates into alcohol or organic acids using microorganisms  
 d) The process of freezing food for long-term storage
- Q.2 What is one of the advantages of food fermentation?  
 a) Reduced shelf life  
 b) Decreased flavor  
 c) Improved preservation  
 d) Lower cost
- Q.3 Which of the following is NOT a type of fermentation process?  
 a) Alcoholic fermentation  
 b) Lactic acid fermentation

- c) Baking  
d) Frying

Q.4 In food fermentation, what are substrates?

  - a) Microorganisms
  - b) Ingredients used in the fermentation process
  - c) End products
  - d) Temperature controllers

Q.5 What is the main purpose of using pure cultures in fermentation?

  - a) To add variety to the flavor
  - b) To ensure consistent product quality
  - c) To reduce fermentation time
  - d) To increase the cost of production

Q.6 Which part of a fermentor is responsible for mixing the fermentation broth?

  - a) Sparger
  - b) Baffles
  - c) Agitator/Impellers
  - d) Process control

## **SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 The main advantage of single-cell protein production is its high \_\_\_\_\_ content.

Q.8 The production of vitamins and amino acids through fermentation is related to the concept of \_\_\_\_\_.

Q.9 The primary microorganism used in yogurt production is \_\_\_\_\_.

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## **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Define food fermentation and explain two advantages of this process.
  - Q.14 Name three different types of fermentation processes and provide an example for each.
  - Q.15 Describe the role of substrates in the fermentation process and provide two examples of commonly used substrates.
  - Q.16 Explain the importance of maintaining pure cultures in food fermentation and outline one procedure for maintaining pure cultures.
  - Q.17 Discuss the basic configuration of a fermentor and describe the functions of agitator/impellers in this equipment.
  - Q.18 What is the purpose of a sparger in a fermentor, and how does it contribute to the fermentation process?
  - Q.19 List the parts of a fermentor responsible for ensuring proper mixing and aeration during fermentation.

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