

REV-01
MBT/10/15

2024/05

**M.Sc. BIOTECHNOLOGY
FOURTH SEMESTER
FOOD BIOPROCESS ENGINEERING
MBT-401**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- Which of the following can be used as a food preservative?
a. Salt, Sodium nitrite, spices and vinegar b. Gypsum, soda and methylalcohol
c. Gypsum, salt and formic acid d. None of them
- Name the milk sugar.
a. Lactose b. Sucrose
c. Raffinose d. None of them
- Which of these is not a product of fermentation?
a. Lactate b. Oxygen
c. Carbon dioxide d. Ethanol
- Temperature and time required for Vat pasteurization is:
a. 62.8 °C for 30 minutes b. 62.8 °C for 2 minutes
c. 52.8 °C for 30 minutes d. 71.7 °C for 30 minutes
- Fermentation occurs in the:
a. Presence of oxygen* b. Absence of oxygen
c. Presence of nitrogen d. Presence of carbon
- What is the percent of acetic acid in vinegar?
a. 2% b. 4%
c. 10% d. 12%
- Which of the following is the process of converting sugar into alcohol?
a. Oxidation b. Pasteurization
c. Bleaching d. Fermentation
- The maximum limit for moisture content for growth of microbes is almost:
a. 0 b. <1
c. >1 d. None of the above
- An example of Non-ionizing radiation is:
a. UV ray b. X ray
c. Γ ray d. Both b and c
- B. Stearothermophilus is related to:
a. Flat sour spoilage b. Sulfide spoilage
c. Putrefactive anaerobic spoilage d. TA spoilage

11. Buttermilk like flavor in citrus fruits is caused by:
 - a. E.coli
 - b. Aspergillus
 - c. Lactobacilli and Leuconostoc
 - d. None of the above
12. Which of the following factor of food is considered as intrinsic factor from food safety point of view?
 - a. Water activity (a_w)
 - b. Relative humidity
 - c. Temperature
 - d. Vapour pressure
13. Acetic acid and lactic acid are used for.....
 - a. Curing meats
 - b. Preservation of color
 - c. Preservation of pickles
 - d. Inhibiting mold growth
14. 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 above
15. Which one of the following is not a chemical preservative found in food?
 - a. Sulphur dioxide
 - b. Sorbic acid
 - c. Sodium nitrate
 - d. Carbon dioxide
16. Production ofoccurs in the fermentation of grains.
 - a. Must
 - b. Brine
 - c. Lactic acid
 - d. Carbon dioxide
17. The Primary Milk carbohydrate is:
 - a. Lactose
 - b. Sucrose
 - c. Arginin
 - d. Leucine
18. Agar-agar is used as:
 - a. Antibiotic
 - b. Stabilizer and thickener
 - c. Colouring agent
 - d. Nutrient supplement
19. Of the listed below products, which contains no dairy ingredients?
 - a. Casein
 - b. Whey
 - c. Custard
 - d. Sorbet
20. Which of the following factor of food is considered as intrinsic factor from food safety point of view?
 - a. Water activity (a_w)
 - b. Relative humidity
 - c. Temperature
 - d. Vapour pressure

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

- | | |
|--|--------|
| 1. Define fermentation and explain its advantage in food preservation. | 10 |
| 2. Explain in brief the classification of food. | 10 |
| 3. Write a short notes on:
a) GRAS
b) SCP | 5+5=10 |
| 4. Discuss the physical methods for preservation of foods. | 10 |
| 5. Write a note on the commercialization of fermented food. | 10 |
| 6. Describe briefly the microbial spoilage of meat and meat products. | 10 |
| 7. Describe in brief the usage of enzymes in food industry. | 10 |
| 8. Describe the biochemical pathway in the production of ethanol. | 10 |

== *** ==