



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – M.Sc.(MB)-2023
Course Name – Food Microbiology
Course Code - MMBE206
(Semester II)

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) Identify that which of the following is not the property of the fermented food
- | | |
|----------------------|------------------|
| a) Highly Nutritious | b) Cytotoxic |
| c) Anti-toxicity | d) Anti-nutrient |
- (ii) Select the microbe which is applied for the blue cheese production
- | | |
|-------------------------------|-----------------------------|
| a) Streptococcus thermophilus | b) Lactobacillus bulgaricus |
| c) Penicillium roqueforti | d) Rhizopus stolonifer |
- (iii) Name the key bacteria for yogurt is
- | | |
|-------------------------------|---------------------------|
| a) Streptococcus thermophilus | b) Leuconostoc citrovorum |
| c) Lactobacillus acidophilus | d) Streptococcus lactis |
- (iv) Name the disease where Probiotics are used in the prevention of
- | | |
|----------------------------|--------------------|
| a) Cardiac disease | b) Hypertension |
| c) Digestive tract disease | d) Lungs infection |
- (v) Select the food products having higher acidity and lacks aroma is
- | | |
|------------------------|------------------------|
| a) Cultured buttermilk | b) Cultured sour cream |
| c) Bulgarian milk | d) Acidophilus milk |
- (vi) Identify the heterofermentative bacterial species
- | | |
|---------------------|-----------------------|
| a) Lueconostoc spp. | b) Enterococcus spp. |
| c) Pediococcus spp. | d) Streptococcus spp. |
- (vii) Some streptococci that produce lactic acid also produce certain aldehydes, cite a _____ flavor
- | | |
|----------|-------------|
| a) Malty | b) Bitter |
| c) Salty | d) Metallic |

- (viii) Lactic Acid Fermentation is the most effective practice for
- a) Increasing the quantity of food
 - b) Preparation of brown bread
 - c) Food preservation
 - d) Production of beer
- (ix) Which statement of food preservation is true
- a) Leafy vegetables perish fast due to their high moisture content
 - b) Cereals have the highest requirements of moisture and soil types
 - c) Cereal can be grown with less labour and yield of food is high
 - d) All of the mentioned
- (x) Which one will have higher bacteriostatic effect at a given pH?
- a) Acetic acid
 - b) Tartaric acid
 - c) Citric acid
 - d) Maleic acid
- (xi) A bacterial food intoxication corelates
- a) illness caused by presence of pathogens
 - b) food borne illness caused by the presence of a bacterial toxin formed in food
 - c) both
 - d) none of these
- (xii) The successful method for the treatment of botulism prior to appearance of botulism symptoms involve direction of
- a) antibiotic
 - b) analgesic
 - c) antitoxin
 - d) antipyretic
- (xiii) Analyze the following dye is colourless at acidic pH and becomes red at basic pH
- a) Methyl red
 - b) Thymol blue
 - c) Phenolphthalein
 - d) Phenol red
- (xiv) Select the method is useful for isolation and detection of organisms having the ability to produce organic acids
- a) Crowded plate technique
 - b) Auxanographic technique
 - c) Enrichment Culture technique
 - d) Indicator dye technique
- (xv) Categorize the following which shows the zone of inhibition when a particular organism is grown on a Petri plate
- a) Growth Factor producers
 - b) Antibiotic producers
 - c) Organic acid producers
 - d) Amino acid producers

Group-B

(Short Answer Type Questions)

3 x 5=15

2. State the role of maturation of microorganisms in soy sauce (3)
3. Cite mold-ripened cheese? Give two examples. (3)
4. Deduce the 3 types of spoilage seen in canned foods. (3)
5. Summarize the role of rennet in separation of curd & whey. (3)
6. Choose the method of food preservation removes water as a means for eliminating microbial growth? (3)

OR

Write the role of the major gases involved in MAP.

(3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Justify on the role of thermodurics in food spoilage. (5)

8. Explain the general approaches that are available to reduce the rate of or inhibit microbial food spoilage (5)
9. Explain food intoxication. (5)
10. Name the bacterial etiological agents of food-poisoning. Describe the strategy involved in control outbreaks of food-poisoning (5)
11. Define sterilization. List the various methods of sterilization with suitable examples (5)
12. Briefly mention the six types of hazards included in Principle 1: Assess Hazard & Risks (5)

OR

How can qPCR be considered more advantageous over normal PCR method in detection of food borne pathogens (5)
