

Leather
SOS

P. P. SAVANI UNIVERSITY

Fifth Semester of B.Sc. Examination

December-2021

SSMB3070–Food and Dairy Microbiology-I

07.12.2021, Tuesday Time: 09:00 a.m. to 11:30 a.m. Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

Section-I (Total Marks - 30)

Q.1 Short Questions

1.1 Objectives

[10]

1.1a Which one of the following is a Class I preservative

[05]

- A Salt and sugar
- B Benzoic acid
- C Sorbic acid
- D Sodium and potassium salts

1.1b Which of the following is classified as semi-perishable food item

- A Baked goods
- B Fresh fruits
- C Meat and fish
- D Milk

1.1c Food preservation involves

- A Increasing shelf life of food
- B Ensuring safety for human consumption
- C Both A and B
- D None of these

1.1d Which of the following produces citric acid?

- A *Aspergillus*
- B *Pseudomonas*
- C *Saccharomyces*
- D *Clostridium*

1.1e HTST stands for

- A High temperature slow treatment
- B High temperature short time
- C High time slow treatment
- D High thermal slow time

1.1f All the following techniques are household preservation technique except

- A Smoking
- B Lyophilisation
- C Dehydration
- D Salting

1.1g The primary protein in milk is

- A Casein
- B Lysine
- C Tryptophan
- D Valine

1.1h Which of the following organisms is used in alcoholic fermentation?

- A *Pseudomonas*
- B *Aspergillus*
- C *Saccharomyces*
- D *Penicillium*

1.1i The process of preserving food by rapid freezing followed by dehydration under vacuum is called

- A Lyophilisation
- B Sterilization
- C Cold Dehydration
- D Cryopreservation

1.1j Microorganism NOT used as dairy starter culture

- A *Lactobacillus Acidophilus*
- B *Lactobacillus Casei*
- C *Bifidobacterium sp.*
- D *Salmonella typhi*

1.2 Answer the Following: (MCQ/Short Question/Fill in the Blanks)

[05]

1.2a What are acidophiles?

1.2b Define food irradiation

1.2c Give one example of probiotic food.

1.2d What are spoilage bacteria? Briefly explain the types of spoilage they cause in food.

1.2e State two methods of freezing.

Q.2 Short Notes (Attempt any two)

[06]

A What are probiotics and why are they important?

B How can you preserve food using chemicals and radiation?

C Describe preservation by freezing along with its advantages and disadvantages.

Q.3 Explain in detail (Attempt any two)

[14]

A What is the application and importance of dairy starter culture?

B State the intrinsic and extrinsic parameters affecting microbial growth.

C What is food preservation? Explain in detail the common methods of food preservation.

Section-II (Total Marks - 30)

Q.1 Short Questions

1.1 Objectives

[10]

1.1a Pickles and sauerkraut share a common inoculum which is...

[05]

- A *Lactobacillus planatarum*
- B *Lactobacillus bulgaricus*
- C *Sacharomyce cerevisiae*
- D *Lactobacillus acidophilus*

1.1b Fermentation is the

- A Production of alcoholic beverages by microbes.
- B Use of microbes in sewage and pollution control.
- C Mass, controlled culture of microbes to synthesize the products.
- D All of the above

1.1c Chemical preservation do NOT include

- A Alcohol
- B Starch
- C Organic acids
- D Sulfites

1.1d Most spoilage bacteria grow at

- A Neutral pH
- B Alkaline pH
- C Acidic pH
- D Any of the pH

1.1e _____ relates to addition of lactic acid bacteria to diet in order to provide health benefits.

- A Antibiotics
- B Probiotics
- C Adjuvants
- D Prebiotics

1.1f Which of the following is the primary carbohydrate in milk?

- A Glucose
- B Sucrose
- C Lactose
- D Maltose

1.1g Milk contains 87% water and rest is milk solids, which of the following is NOT included in milk solids?

- A Proteins
- B Nucleic acids
- C Carbohydrates
- D Fats

1.1h Which of the following will be classified as "Hard Cheese"?

- A Brick
- B Monterey jack
- C Cheddar

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