V. M. SALGAOCAR INSTITUTE
of
INTERNATIONAL HOSPITALITY EDUCATION

B. Sc. Culinary Arts

Type: Semester End Assessment (SEA) Date: 20/11/2024

Batch and Semester: 2023-2026 & III Total Marks: 25 Time Duration: 2 Hours

Course Name: Introductory Course in Food Microbiology Course Code: CAO005

Instructor: Ms. Alyce C. Rodrigues

This paper contains 02 pages in addition to the cover page.

Full Name of the Student: _____

Permanent Registration Number: _____Class: _____

Marks Obtained: _____Faculty Signature: _____ Invigilator Signature: _____

Main Answer sheet	Number of Supplements	Total number of Answer sheets
01		

- Carefully read each question at the outset of the paper. All queries must be addressed to the faculty within the first 10 minutes of the examination.
- Students are expected to maintain complete silence in the examination hall and should not interact or communicate with their peers.
- Students will carry only their essential stationery like pens, pencils, ruler and simple calculators into the examination hall.
- Bags, eatables, drinks, etc. will not be allowed inside the hall with the exception of a bottle of water.
- Cell phones, electronic data banks, scientific calculators and smart/beeping watches are prohibited in the examination hall.
- Students will answer the examination with only blue/ black ball point pens unless informed differently by faculty. Avoid usage of green or red ink pens on the answer sheet.
- Dictionaries will not be allowed into examination hall unless informed differently by faculty.

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Q.1. Fill in the blanks with the most appropriate answer:

(0.5 marks each = 2 Marks)

1. Cholera is caused by _____.

   (*Escherichia coli, Vibrio cholerae, Salmonella enteritidis)*

2. Brown rot on apples is caused by _____

   (Mold Penicillium, Aspergillus niger, Mold Monilia)

3. _____is a heat treatment at 135°C for 2 seconds that kills pathogenic microorganisms and some spoilage organisms.

   (High-temperature short time, Low-temperature holding, Ultra high-temperature sterilization)

4. _____is a method of exposing food to ionizing radiation to extend its shelf life.

   (Blanching, Cold sterilization, Pasteurization, Chilling)

Q.2 Answers <u>ANY 2</u> of the following questions. **(2 marks each = 4 Marks)**

1. Discuss class 1 preservative, and give 1 example.
2. Differentiate between food infection and food poisoning (2 points)
3. Write a short note on modified atmospheric packaging

Q.3 Answer <u>ANY 1</u> of the following questions. **(3 Marks)**

1. Probiotics and prebiotics play an important role in supporting digestive health. Explain what are probiotics and prebiotics, and provide one examples of each.

2. Define food fermentation, and explain any 2 key benefits with examples.

Q. 4. Answer <u>ANY 2</u> of the following questions **(6 marks each = 12 Marks)**

1. Contamination in food processing is a critical concern as it can occur at various stages, impacting food safety and quality. Describe any three sources of contamination, such as raw materials (plants or animals), air, water, or soil.

2. Microbial growth in food is influenced by several internal factors, which can impact food quality, shelf life, and safety. Discuss three intrinsic factors that affect microbial growth in food, explaining how each factor plays a role in either promoting or inhibiting microbial development.

3. Food preservation is essential for extending shelf life, maintaining quality, and ensuring safety. Describe in detail any two methods of food preservation (freeze drying/ pasteurization/ canning, irradiation/ freezing).

Q.5 With a help of a diagram explain <u>ANY 1</u> of the following. **(4 Marks)**

1. Morphology of fungal mold.
2. Different phases in the microbial growth curve.