

B.Tech,
2022
3rd Sem.

B.Tech Food Technology
Semester-III Examination, 2022
Paper Title: Food Microbiology
Paper Code: BFTC-302

Roll no: _____

Time allowed: 3 hr

Max. marks: 75

(Write Roll no. at the top immediately on receipt of question paper)

Note: Section A is compulsory, Attempt any four questions from section B.

Section A (35 marks)

Q1. Multiple choice questions/Fill in the blanks: (10M)

- a. Organisms that thrive in cold environment are termed as _____.
- b. Spore formers commonly found in canned foods are _____ and _____.
- c. _____ mold is responsible for causing Aflatoxicosis
- d. State True/false. Carbohydrate breakdown in foods by micro-organisms causes increase in pH.
- e. _____ are the chief gas formers in milk.
- f. Yeast responsible for conversion of sugars to alcohol is _____.
- g. Red milk usually is caused by the microorganism _____.
- h. The class of organisms that grow aerobically as well as anaerobically are termed as _____.
- i. Formation of rots, in spoilage is seen in which group of foods? _____
- j. The time required to kill microorganisms at a given lethal temperature is known as _____.

Q2. What are the techniques used for isolation and enumeration of micro-organisms. (4M)

Q3. Define: Putrefaction, Stormy fermentation, Vacreation, Sandblasting (4M)

Q4. State intrinsic parameters affecting microbial growth? (4M)

Q5. Draw a typical bacterial growth curve and state features (4M)

Q6. State any four chemical preservatives used for foods with respective examples (4M)

Q7. Match the following: (Match column A with column B and write in answer sheet) (5M)

A	B
A. Sarcina Sickness	i. <i>Erwinia carotovora</i>
B. Yellow milk	ii. <i>Pseudomonas synxantha</i>
C. Vegetable rots	iii. <i>Pediococcus cerevisiae</i>
D. Mastitis	iv. <i>Streptococcus agalactiae</i>
E. Eggs	v. <i>Salmonella enteridis</i>

Section B (4*10=40 marks)

1. Explain spoilage of milk with respect to sweet curdling and ropiness? Give appropriate examples and types of changes brought about by respective organisms.
2. Discuss microbiology and related defects of any fermented vegetable based product.
3. Define probiotics, prebiotics and synbiotics. Discuss the health benefits of probiotics.
4. Distinguish between endotoxins and exotoxins. Draw suitable diagrams and give examples. Which of the two is more harmful than the other? State relevant reason.
5. Define meat curing. Use a flowsheet to illustrate the changes that myoglobin undergoes during cooking and curing process.
6. Write a short note on:
 - a. Two bacterial food borne intoxications
 - b. Scombroid fish poisoning

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