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Total No. of Pages : 02

Total No. of Questions : 15

M.Sc. (Food Technology) (2019 Batch PIT) (Sem.-I)

**FOOD MICROBIOLOGY**

Subject Code : UC-MSFT-513-19

M.Code : 77273

Time : 3 Hrs.

Max. Marks : 70

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A contains SEVEN questions carrying TWO marks each and students has to attempt ALL questions.
2. SECTIONS-B consists of FOUR Subsections : Units-I, II, III & IV. Each Subsection contains TWO questions each carrying FOURTEEN marks each and student has to attempt any ONE question from each Subsection.

**SECTION-A**

1. Enlist two important historical developments in the field of food microbiology.
2. What do you understand by aflatoxins? Give examples. Define food intoxication
3. along with example. Write the name of principal microorganisms used for yogurt
4. production. What is water activity? What do you understand by food safety? What
5. are the causes of spoilage of food?
- 6.
- 7.

**SECTION-B**

**UNIT-I**

8. Write briefly about :
  - a) Types of microorganisms normally associated with food along with examples.
  - b) Contamination of vegetables and meat during handling and processing.
9. Define food microbiology. Discuss the three and five kingdom classification along with diagram.

## UNIT-II

10. a) Discuss the deterioration of various types of food products.  
b) Write short note on low temperature storage and chemical preservatives.
11. a) Explain the different intrinsic factors which effect the microbial growth.  
b) Discuss the microbiology of food preservation along with some examples of food products.

## UNIT-III

12. Define fermentation. Explain the different fermented beverages along with flow diagram.
13. Write short notes on the following :
  - a) Fermented meat products
  - b) Production of beer and vinegar

## UNIT-IV

14. a) What are microbial toxins? Explain the various bacterial agents of food borne illness.  
b) Explain the hurdle technology and its applications.
15. Write short note on :
  - a) Non-bacterial agents of food borne illness
  - b) Microbial standards for different foods

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.