

Exam.Code:0911

Sub. Code: 6324

2123

B.E. (Bio-Technology) Seventh Semester  
BIO-712: Food Biotechnology

Time allowed: 3 Hours

Max. Marks: 50

*NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.*

x-x-x

- I. Answer the following briefly:-
- Which fungi produce ochratoxin?
  - What is the genetic structure of rotavirus?
  - What are two advantages of single cell proteins?
  - What is miso paste?
  - What bacteria causes fruit spoilage?
  - What are antioxidants?
  - What range of radiation do microwaves cover?
  - What is John Needham contribution to microbiology?
  - What are three common waterborne diseases?
  - Why do fruits turn brown when exposed to air? (10x1)

**UNIT - I**

- II. a) Enlist various intrinsic and extrinsic factors affecting growth of microorganisms in food. Describe about pH and water activity factors  
b) Write a note on airborne and soil borne microorganisms. (2x5)
- III. a) Write down about spoilage of cereal and cereal products.  
b) What are the differences between slow and quick freezing? (2x5)
- IV. a) What are the three main gases used in MAP? List their important characteristics used to increase shelf life with optimal organoleptic properties of food.  
b) Explain meat spoilage under aerobic and anaerobic conditions. (2x5)

P.T.O.

(2)

UNIT - II

- V. a) Give general outline of steps required for making soya sauce.  
b) Explain the three phases of MPN test in food? (3,7)
- VI. Write down about characteristics, pathogenesis and laboratory diagnosis of *Vibrio cholera*. (10)
- VII. a) Explain DEFT method to estimate the number of microorganisms in food?  
b) Explain the seven basic principles of HACCP? (2x5)

x-x-x