

1058

B.Sc. (Hons.) Biotechnology

Sixth Semester

BIOT- Sem-VI-III-T: Food Bio-Technology

Time allowed: 3 Hours

Max. Marks: 67

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Attempt the following:

- a) What are the sources of single cell proteins?
- b) Give two examples of classical biotechnology.
- c) Give the name of major contaminants in food.
- d) What are the major coloring agents?
- e) What are the genetic manipulated (GM) foods?
- f) Which types of disease can be created by *Shigella* and *Salmonella* bacterial species?
- g) Write name of two qualitative methods used in bacterial detection in the food products.
- h) What are the nutraceuticals?
- i) Write two names of enzymes generally used in bread industry.
- j) Write name of two probiotic agents. (10x1)

UNIT - I

- II.
 - a) Write about the classical food biotechnology with examples.
 - b) Describe the DNA probes based biosensors for pathogens detection in food products. (7,8)
- III.
 - a) Describe the various immunoassays applied in identification of microorganisms in food products.
 - b) Write the applications of enzymes in food biotechnology (7,8)

UNIT - II

- IV.
 - a) What are the various methods of food preservation? Explain only biological methods of food preservation.
 - b) What are the major sources of milk and milk products spoilage? (7,7)

(2)

- V. a) What is the cheese? Write the method of cheese formation and preservation.
b) Describe in brief about the two alcoholic beverages. (7,7)

UNIT - III

- VI. a) Write the role of major flavoring agents used in the food industries.
b) Prove that "fermentation" is the food preservation method (7,7)
- VII. a) What is the fortification? How iron fortification of food products is significant for Indian population?
b) What is SCP? Write the sources of single cell proteins from microorganisms. (7,7)

UNIT - IV

- VIII. a) Give the name of different food borne diseases and their causing agents.
b) How you will analyze and detect the microorganisms in water. (7,7)
- IX. a) What are the food borne disuses caused by *Clostridium Botulinum* bacteria?
b) What are the endotoxins, produced by various microorganisms? (7,7)

x-x-x