

2125

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 questions:-

- a) Define Food Biotechnology.
- b) Name two microorganisms used in food fermentation.
- c) List any two intrinsic factors affecting microbial growth in food.
- d) What is food spoilage?
- e) Mention two examples of food-borne bacterial pathogens.
- f) Define Single Cell Protein (SCP).
- g) Name one viral and one protozoan food-borne disease.
- h) What is pasteurization?
- i) Define HACCP and its purpose.
- j) Give two examples of food preservation methods.

(10×1)

UNIT - I

- II.
 - a) Write short notes on common food-borne fungi and yeasts.
 - b) Describe biochemical changes brought by microorganisms in food.
- III.
 - a) Discuss the microbiology of fruits, vegetables and canned foods.
 - b) Explain factors that influence microbial activity in cereals and eggs.
- IV.
 - a) Explain the role of temperature and radiation in food preservation.
 - b) Describe the principle and advantages of freeze drying.

(5,5)

(6,4)

(5,5)

P.T.O.

(2)

UNIT - II

V. Write a short note on any two the following and the pathogenesis caused by these:

- a) *Staphylococcus aureus*
- b) *Clostridium botulinum*
- c) *Escherichiacoli*
- d) *Listeria monocytogenes*
- e) *Trichinellosis*

(2x5)

VI. a) Write short notes on the food value of mushrooms.

b) Discuss the role of microorganisms in the production of Single Cell Proteins (SCP).

(4,6)

VII. a) Discuss the importance of HACCP, GMP and GHP in maintaining food safety.

b) Explain applications of molecular biology in food technology.

(6,4)

x-x-x