

M. TECH DEGREE EXAMINATIONS: APRIL / MAY 2010

Second Semester

BIOTECHNOLOGY

BTY557: Food Processing and Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. Delineate thermal diffusivity
2. What is terminal velocity?
3. List the factors responsible for food spoilage.
4. Define radication
5. What is tubular bowl centrifuge
6. What is kick's law?
7. Name the four enzymes used in fruit industry.
8. What is controlled atmospheric storage?
9. What are the seven different steps involved in cheddar cheese manufacturing?
10. What are the wine defects and spoilage?

PART B (5 x 16 = 80 Marks)

11. a) What are the major constituents of food? Explain food constituents and their major role in detail.

(OR)

- b) Give a detail account on: (i) Physical properties of foods (8)
(ii) Thermal properties of foods (8)

12. a) What are the food borne diseases? Classify the bacterial food borne diseases in detail.

(OR)

- b) Write a detail note on:
(i) Fermented food "Single cell Protein" and Mycoprotein production (8)
(ii) Microbes synthesized beneficial food chemicals (8)

13. a) Write a short note on:

- (i) Extraction (6)
- (ii) Filtration (6)
- (iii) Membrane separation (4)

(OR)

b) Describe the characteristics of raw material for preparation in food processing industry.

14. a) Define food preservation. Write a detailed account on sterilization, pasteurization, blanching and aseptic canning.

(OR)

- b) What is frozen storage? (2)
 - (i) Write a brief note on freezing characteristic of food. (6)
 - (ii) What are the factors affecting the quality of frozen foods (8)

15. a) Give a detail note on diary products and their manufacturing process.

(OR)

b) Write a detail account on:

- (i) Vegetable and fruit products (8)
- (ii) Confectionery and beverages (8)
