

[illegible]

B.Tech. (Food Tech) (2014 Onwards) (Sem.-7)
FOOD PLANT DESIGN AND PROJECT ENGINEERING
Subject Code : BTFT-701

Max. Marks : 60

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

1. Answer briefly :

- What are special considerations in the design of food plant over other plants?
- What is parametric optimization?
- What are important characteristics of food plant buildings?
- What preliminary data on raw material is required for a food plant design?
- Define process system.
- What are the basic principles of scaling in pilot plant studies?
- Differentiate between single and multiple-use CIP system.
- Differentiate between direct and indirect manufacturing cost.
- Define operating cost. What are the different categories of operating costs in food processing plants?
- Define EVA (economic value added). What can be inferred from EVA?

SECTION-B

2. Discuss the importance of various utilities in food plant design.
3. Write a note on the optimization of food plant processes.
4. Explain the steps involved in processing system alternatives analysis by simulation.
5. Discuss the types and applications of pilot plant.
6. Explain the various measures of plant profitability.

SECTION-C

7.
 - a) Discuss the important characteristics of construction materials for food equipment.
 - b) Explain the basic principles of hygienic design of auxiliary systems in contact with foods.
8. Describe the documents and information included in the food processing system final project.
9. Describe the design and economics of a fruit canning plant with the process flow sheet.

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