

**B. TECH****(SEM VI) THEORY EXAMINATION 2018-19****FOOD PROCESSING PLANT DESIGN AND LAYOUT****Time: 3 Hours****Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

1. Attempt *all* questions in brief. 2 x 10 = 20
- a. How to select the location of plant layout?
  - b. What are the most common applications of a pilot plant?
  - c. What are the objectives of mixing sand to prepare mortar?
  - d. How can you define refrigeration of meat?
  - e. What is seed dressing?
  - f. How a cold storage is important for food?
  - g. What are the favourable conditions for food spoilage?
  - h. What are the advantages of frozen foods?
  - i. What is mortar?
  - j. What are the different types of water proof membranes?

**SECTION B**

2. Attempt any *three* of the following: 10 x 3 = 30
- a. What is the relationship between process equipment cost and work capacity?
  - b. How will you design a plant for food processing? Explain with neat sketch.
  - c. Prepare process schedule of a milk-processing plant handling approximately 1.25 lakh liters of milk in morning and evening.
  - d. Explain the different feature of the food processing plant. Describe their objective and principal of food processing plant layout.
  - e. How do you classify plant capacity? Explain their application for food industry.

**SECTION C**

3. Attempt any *one* part of the following: 10 x 1 = 10
- (a) What is sanitation? Explain the sanitation requirement in food processing plants.
  - (b) Explain the following-
    - (i) Properties of Brick
    - (ii) Curing of concrete
4. Attempt any *one* part of the following: 10 x 1 = 10
- (a) Explain the material of construction of food equipments.
  - (b) Explain the procedure of operating cost estimation? What types of curves are used in operating cost estimation?
5. Attempt any *one* part of the following: 10 x 1 = 10
- (a) Explain the different unit operation performance during designing of food processing plant.
  - (b) Write short notes on the following-
    - (i) Preservation of wood
    - (ii) Total cost function
6. Attempt any *one* part of the following: 10 x 1 = 10
- (a) What is the role of industries in food processing? Give the status of fruits and vegetable processing in India.
  - (b) What is the relationship between process equipment cost and work capacity?
7. Attempt any *one* part of the following: 10 x 1 = 10
- (a) Explain the procedure with flow diagram for new food processing plant installation and also explain the cost analysis.
  - (b) Explain the selection of labor requirement according to their respective works in food processing plants.