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Paper Id:

180604

Sub Code: NAG 012

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**B TECH
(SEM-VI) THEORY EXAMINATION 2017-18
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) Discuss the processing and control of food processing.
 - b) How preparation of feasibility?
 - c) Explain the processing of milk.
 - d) What are various types of plant layout?
 - e) Explain any four equipment of material handling device.
 - f) Define sterilization.
 - g) What do you mean by pasteurization?
 - h) Define sanitation.
 - i) Describe in shorts the steps involve in plant layout design project.
 - j) Enlisted the different power transmission units used in food processing.

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a) Discuss the principle and method of food processing industry.
 - b) What is the role of industries in food processing? Give the status of fruits and vegetable processing in India.
 - c) Describe the different unit operation performance during designing of food process equipments.
 - d) Explain the advantages and disadvantages of food processing.
 - e) Write short note on the following:-
 - i. Pasteurization.
 - ii. Fermentation.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- a) Explain the selection of labor requirement according to their respective works in food processing plant.
 - b) Describe the factors of consideration in selection of location of plant and describe in shorts the steps involve in plant layout design project.
- 4. Attempt any one part of the following: 10 x 1 = 10**
- a) Elaborate the selection of equipments used in food processing plant. Also define the factors on which equipment reliability depend?
 - b) How will you design a plant for food processing? Explain with neat sketch.

5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a) Explain the requirement of plant building and its component.
 - b) Describe the project design and their process in flow diagram.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a) What do you mean by sanitation and economic costs of sanitation?
 - b) Explain the material construction of food equipment and characteristics of suitable construction of plant location.
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a) Write short notes on the following:-
 - (i) HTST.
 - (ii) LTST.
 - b) Define homogenization. What is the advantage and disadvantage of homogenization?