

2024

**Food Processing & Quality Management / Food Processing Technology / Food Processing  
(AGRI)**

Paper: FPR0200304

*(Food Plant layout and utilities)*

Full Marks: 60

Time: 2 hours 30 Minutes

**The figures in the margin indicate full marks for the questions.**

1. State whether the following statements are True or False: 1x8=8
  - a. Plant location refers to the choice of region where men, materials, money, machinery and equipment are brought together for setting up a new plant
  - b. Machines are arranged according to the nature of operations, this is called line layout
  - c. Combination layout is also called stationary layout
  - d. "-----" symbol denotes Major Process in food plant design
  - e. Plant layout is a plan for effective utilization of facilities for the manufacture of products
  - f. In Process Layout, all machines performing similar types of operations are grouped at one location
  - g. Process steam is one of the principle plant utilities in a food plant
  - h. CIP is an automatically performed method of cleaning in food processing
  
2. Answer the following in brief: (Any Six) 2x6=12
  - a. Principles of Plant Layout
  - b. What is COP ?
  - c. Write four factors in selection of a plant
  - d. Four salient features of horticultural crops
  - e. Mention any four symbols used for food plant design and layout
  - f. What do you mean by food plant sanitation ?
  - g. Write the different types of Plant Layout.
  - h. Difference between Line Layout and Process Layout.
  - i. What is Food Plant Utilities ?
  - j. Write the comparison of batch versus continuous operation.
  
3. Answer on any four : 5x4=20
  - a. Advantages of Line Layout.
  - b. Mention about the factors affecting in planning layout.
  - c. Salient features of milk and milk products.
  - d. Write about the location selection criteria.
  - e. Write briefly about CIP.
  - f. Mention symbols used for food valves and line symbols.
  - g. Write about the Food Plant Utilities.
  - h. Mention about the preparation of plant layout.
  
4. Answer any two from the following: 10x2=20
  - a. Describe in detail about the different types of plant layout.
  - b. What is Plant Layout? Write about the principle of plant Layout. 2+8=10
  - c. Discuss in detail about the symbols used for food plant design and layout.
  - d. What is Plant Location? Write briefly about the selection of the plant site. 2+8=10
  - e. Write in detail about CIP and COP ? 5+5=10