



KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Food Engg.) 2019 Admission
VI Semester Final Examination – June 2022

Fden.3209

Food Process Equipment Design & Plant Layout (2+1)

Marks: 50
Time: 2 hours
(10x1=10)

I Fill in the blanks

1. The product layout is also called _____.
2. _____ layout is suited for mass production.
3. Evaporation is the removal of _____ as vapor from a solution, slurry or suspension of solid in a liquid.
4. _____ layout is preferred for low volume production of non standard products.
5. _____ differs from the other mass transfer operations such as distillation and drying.

State True or False

6. Functional layout is also called as Process layout.
7. A self-service cafeteria is usually positioned as product layout.
8. A common goal in process layouts is to Maximize transportation distance.
9. Plant layout refers to an optimum arrangement of different facilities including human resource, plant and machinery, material etc.
10. Dryer can be classified based on mode of operation such as batch or continuous.

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Explain the process layout.
2. What is extraction? Write the applications of juice extractions.
3. Write a short notes on Extrusion.
4. Enlist the various factors which are to be considered for replacement of an equipments.
5. Differentiate dryer and evaporator.
6. Write a short note on Homogenizer.
7. Write a flow diagram of dairy plant layout.

III Answer ANY FIVE of the following

(5x4=20)

1. What are the Types of machinery used for separation of products by shape and colour? Explain any one.
2. Discuss about the scope of food process equipment designs.
3. How do you discuss about the Different criteria for plant site selection?
4. Explain the product layout and process layout in detail.
5. What are the different drying process? Explain any one.
6. Discuss Queuing theory and it importance in food plant design.
7. Write the advantages and disadvantages of functional layout.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Define the various types of plant layout in brief with suitable examples of each.
2. Briefly explain the Food plant Layout design Procedure.
