


Name:			
Enrolment No:			
UPES			
End Semester Examination, December 2024			
Course: Food Process Plant Design		Semester: VII	
Program: B.Tech. Food Technology		Duration: 3 Hours	
Course Code: HSFT4003		Max. Marks: 100	
Instructions: Read each question carefully and answer			
S. No.	Section A MCQs (20Qx1.5M= 30 Marks)	Marks	COs
Q1	If all the processing equipment and machines are arranged according to the sequence of operations of a product the layout is known as: a) Product layout b) Process layout c) Fixed position layout d) Combination layout	1.5	CO4
Q2	The following type of layout is preferred to manufacture a standard product in large quantities. a) Product layout b) Process layout c) Fixed position layout d) Combination layout	1.5	CO4
Q3	In manufacturing of a heavy food drying equipment, the type of layout preferred is a) Product layout b) Process layout c) Fixed position layout d) Combination layout	1.5	CO4
Q4	Salary paid to permanent employees during the production of a product is: a) None of these b) Variable cost c) Fixed cost d) Total cost	1.5	CO4
Q5	The break-even point for an organization can be reduced by a) Reducing the variable cost b) Increasing the selling price c) Reducing the fixed cost	1.5	CO4

	d) All of these		
Q6	Facility planning is also known as a) Facilities layout b) Plant layout c) All of these d) Facilities design	1.5	CO2
Q7	In which layout the general-purpose equipment are used? a) Product b) All of these c) Group d) Process	1.5	CO2
Q8	Ventilation inside a facility is an example of a) Location b) Layout system c) Facility system d) Layout	1.5	CO2
Q9	Variable cost is the maximum in a) Low volume, High variety processes b) All of these c) Low variety, High volume processes d) Repetitive processes	1.5	CO3
Q10	In which layout the work-in-process inventory is generally maximum? a) Product b) Process c) Group d) All of these	1.5	CO3
Q11	Which type of industry uses rigidly controlled channels like tubes, pipes and conveyors for continuous flow of materials? a) None of these b) Repetitive process c) Intermittent process d) Continuous process	1.5	CO3
Q12	Which layout you would recommend for a standardized product having a large stable demand? a) Group b) Process c) All of these d) Product	1.5	CO3
Q13	The Break-even Point of a company is the level of sales income which will equal the sum of its fixed cost.	1.5	CO3

	<ul style="list-style-type: none"> a) True b) False 		
Q14	<p>Which of the following are characteristics of the Break-even Point?</p> <ul style="list-style-type: none"> a) There is no loss and no profit to the firm. b) Total revenue is equal to total cost. c) Contribution is equal to fixed cost. d) All of the above. 	1.5	CO2
Q15	<p>While measuring break-even analysis, it is considered that during a specific period, there will be no change in the general price level, i.e., labor, cost of material and other overheads.</p> <ul style="list-style-type: none"> a) True b) False 	1.5	CO2
Q16	<p>Which of the following explains the need for facility location selection?</p> <ul style="list-style-type: none"> a) When the existing business unit has outgrown its original facilities and expansion is not possible. b) When a business is newly started. c) When the lease expires, and the landlord does not renew the lease. d) All of these 	1.5	CO1
Q17	<p>Transportation cost mainly depends on which of the following factors?</p> <ul style="list-style-type: none"> a) Distance b) Weight of products c) Time required for transportation d) All of the above 	1.5	CO3
Q18	<p>Which of the following does not cause to production delay?</p> <ul style="list-style-type: none"> a) Shortage of space b) Long-distance movement of materials c) Spoiled work d) Minimum material handling 	1.5	CO6
Q19	<p>In which of the following layout type, materials are fed into the first machine and finished products come out of the last machine?</p> <ul style="list-style-type: none"> a) Product layout b) Process layout c) Fixed position layout d) Cellular manufacturing layout 	1.5	CO6
Q20	<p>Which of the following is not an advantage of using product layout?</p> <ul style="list-style-type: none"> a) Minimum material handling cost b) Minimum inspection requirement 	1.5	CO5

	c) Specialized supervision requirement d) None of these		
Section B (4Qx5M=20 Marks)			
Q 1	Explain different phases of the layout design procedure.	5	CO5
Q 2	What are the factors considered during the plant layout design procedure?	5	CO4
Q 3	Explain the break-even analysis for the selection of a site.	5	CO3
Q 4	Explain the types of layouts and their significance.	5	CO4
Section C (2Qx15M=30 Marks)			
Q 1	Suresh wants to set up a dairy processing plant. As a food technologist, how can you assist and suggest him? (5 marks) i. Write about the preparation of the feasibility report. (5 marks) ii. How can he identify the location of the plant? (5 marks)	15	CO3
Q 2	Anita, a food technology graduate, was assigned the task of troubleshooting the issues occurring in a fruit and vegetable drying plant. a) Describe the importance of symbols in plant layout for her. Draw four types of line symbols (10 marks) b) How experimentation in a pilot plant is important? (5 marks)	15	CO5
Section D (2Qx10M=20 Marks)			
Q 1	Write a short note on the following (2 marks each) : a) Cost analysis b) Feasibility analysis c) Importance of plant location. d) Flooring in a food processing plant e) Importance of symbols in layout design	10	CO5
Q 2	What are the objectives of plant layout? What are the factors that should be considered while selecting a general site and a specific site? (4+6 marks)	10	CO1