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 Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q1	In which layout is the work-in-process inventory generally maximum? a) Product b) Process c) Group d) All of these	1.5	CO4
Q2	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	CO4
Q3	Which layout would you recommend for a standardized product having a large stable demand? a) Group b) Process c) All of these d) Product	1.5	CO4
Q4	The Break-even Point of a company is the level of sales income which will equal the sum of its fixed cost. a) True b) False	1.5	CO4
Q5	Which of the following are characteristics of the Break-even Point? 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	CO4

Q6	Which of the following does not cause production delay? a) Shortage of space b) Long-distance movement of materials c) Spoiled work d) Minimum material handling	1.5	CO2
Q7	In which of the following layout type, materials are fed into the first machine and finished products come out of the last machine? a) Product layout b) Process layout c) Fixed position layout d) Cellular manufacturing layout	1.5	CO2
Q8	Using the equation method, the Break-even point is calculated as a) Sales = Variable expenses + Fixed expenses + Profit b) Sales = Variable expenses + Fixed expenses - Profit c) Sales = Variable expenses - Fixed expenses + Profit d) None of the above	1.5	CO2
Q9	Production is the process by which raw materials and other inputs are converted into: a) Finished product. b) Services. c) Satisfaction. d) Loyalty	1.5	CO3
Q10	Input in a production system includes: a) Organization, output. b) Process, procedure. c) System, supply. d) Men, materials.	1.5	CO3
Q11	Two types of process scheduling are namely _____.	1.5	CO3
Q12	The advantage of locating a plant in the urban (city) side is. a) Cheap availability of land. b) Disposal of waste is easy. c) The cost of operation is low. d) Large markets for finished products.	1.5	CO3
Q13	The unavailability of skilled labour is a big problem if we locate our factory in a) Road b) Rural c) City d) Foreign.	1.5	CO3
Q14	_____ refers to the arrangement of machinery, equipment and other industrial facilities.	1.5	CO2

	a) Plant lining. b) Plant location. c) Facility location. d) Plant layout.		
Q15	The objective of a good layout is to _____. a) Reduce production. b) Reduce wastage. c) Reduce productivity. d) Reduce labour.	1.5	CO2
Q16	Every foot of available space should be used effectively is a principle of _____. a) Sequence. b) Safety. c) Flexibility. d) Usage.	1.5	CO1
Q17	_____type of layout is also called a functional layout. a) Process. b) Product. c) Line. d) Matrix.	1.5	CO3
Q18	Product layout is also called _____layout. a) Line b) Cellular. c) Process. d) Functional.	1.5	CO6
Q19	Product layout is suitable for ____type of production. a) Small. b) Mass. c) Less. d) Medium.	1.5	CO6
Q20	Production planning and control starts with _. a) Routing. b) Estimating. c) Scheduling. d) Expediting.	1.5	CO5
Section B (4Qx5M=20 Marks)			
Q 1	Describe the importance of process scheduling in a food processing plant. How it play an important role in productivity?	5	CO5
Q 2	Explain the importance of ventilation facilities in food processing plants with some design considerations.	5	CO4

Q 3	Describe the importance of pilot plant studies in detail.	5	CO3
Q 4	What are the major categories of process flow diagrams?	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. i. Describe the importance of symbols in plant layout for her. Draw four types of line symbols **(10 marks)** ii. How is experimentation in a pilot plant important? **(5 marks)**	15	CO5
Section D (2Qx10M=20 Marks)			
Q 1	Describe the broad guidelines for the following: a) preparation of the site layout. b) Design considerations for lighting in a processing plant.	10	CO5
Q 2	What is the importance of plant size and plant location? Elaborate in detail.	10	CO1