	Sem: Oct-2024		
Maximum Marks: 50	**Examination: End Exam**		**Date: 19/10/2024 Duration: 2.5hrs**
Programme code: 18 **Programme:** MBA for working executive (program code-18)		**Class:** FY	**Semester: I** **Batch-3**
College: K. J. Somaiya Institute of Management		**Name of the department/Section/Center:** Operations	
Course Code:		**Name of the Course: O&SCM**	
Instructions: 1. **Question 1 is compulsory.** 2. **Answer any four questions from Question 2 to Question 7.** 3. **Make suitable assumptions wherever required.**			

Question No.		Max. Marks
Q1.	Aarav, the owner of a local departmental store named Apna Store in a bustling neighborhood, has been running his business successfully for the past five years. His loyal customer base appreciates the convenience and personal touch he offers. However, Aarav has recently encountered complaints about inconsistent product quality and stockouts, leading him to consider implementing a quality management system (QMS). A business consultant has advised him that applying quality management principles could enhance operational efficiency and improve customer satisfaction. On the one hand, Aarav believes that these principles are not just for large organizations but can help his small store compete against bigger retail chains by delivering consistent value to customers. The consultant argues that with a proper QMS, Aarav can optimize inventory, reduce waste, and build customer trust. On the other hand, Aarav faces the stark reality of his limited resources. He has a small team, operates on thin margins, and lacks the time and capital to invest in the tools and training needed for a formal quality management system. Implementing these changes would mean stretching his already limited budget and possibly disrupting his daily operations. Aarav is torn between improving his operations and managing his store's day-to-day survival. A. Should Aarav invest in implementing quality management, or will the cost outweigh the benefits in a business where resources are already scarce?	10

	B. How can he balance quality improvements with his limited resources?	
Q2.	Joe Henry's machine shop uses 2,500 brackets during the course of a year. These brackets are purchased from a supplier 90 miles away. The following information is known about the brackets: | Annual Demand	2500
Carrying cost per bracket per year	25% of price of product
Order cost per order	18.75
Working days per year	250
Price of a product	6 | A. Given the above information, what would be the economic order quantity (EOQ)? B. Given the EOQ, what would be the average inventory? What would be the annual inventory carrying cost? C. Given the EOQ, how many orders would be made each year? What would be the annual order cost? D. Given the EOQ, what is the total annual cost of managing the inventory? E. What is the time between orders?	**10**
Q3.	Aarav, the owner of a local departmental store named Apna Store, is contemplating if he should adopt an efficient supply chain or a responsive supply chain, given the emergence of quick commerce. As a consultant, advise Aarav which type of supply chain is more suitable for the Apna departmental store. Also, explain the responsive and efficient supply chain.	**10**
Q4.	Timepass Restaurant is a small-scale restaurant store located in Mumbai. The average footfall in the restaurant is 300 daily and may increase during the festive days and weekends. As a consultant, the owner needs your suggestion on implementing either level strategy or chase strategy of aggregate production planning. What would be your suggestion? Justify. Also, write about the level strategy and chase strategy in aggregate production planning.	**10**
Q5.	A. Explain the product process matrix with suitable examples. B. Briefly explain the transformation process considering the example of Apna departmental store.	**10**

Q6.	Aarav wants to forecast the sales of his departmental store with the below two forecasting techniques: a 2-month-moving average and a 2-month weighted moving average. The weights for the two months are as follows: 50 for the recent month and 30 for the second month. According to you, based on MAD and MAPE, which one of the following is a more suitable forecasting technique?	**10**

Month	Sales
January	450
February	496
March	518
April	563
May	584
June	600

Q7.	Write a short note on (**ANY TWO**): Delphi method Value chain analysis	**10**