

Register No.: Name.:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER MBA DEGREE EXAMINATION (R), DECEMBER 2023

(2021 Scheme)

Course Code : 21MBA241

Course Name: Supply Chain Management

Max. Marks : 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 2 marks)

1. What is meant by achieving strategic fit?
2. What type of distribution networks are typically best suited for highly differentiated products? State reasons for the same
3. What are the main four characteristics of forecasts?
4. Explain the bullwhip effect in supply chain
5. Do you expect aggregation of inventory at one location to be more effective when a company such as Dell sells computers or when a company such as Amazon sells books? Explain by considering transportation and inventory costs.

PART B

(Answer any 3 questions. Each question carries 10 marks)

6. Explain the impact of responsiveness and efficiency on each of the major drivers of supply chain performance.
7. Pepperfry sells furniture from five warehouses in India. Urban Ladder sells furniture from more than 350 retail locations, supported by several warehouses. In both cases, customers place orders using the Web or on the phone. Discuss the pros and cons of the two strategies.
8. A supermarket has experienced weekly demand of milk as follows:

Week	1	2	3	4	5	6	7	8
Demand	5.2	4.9	5.5	4.9	4.7	4.8	5.1	5.3

Forecast the demand for the next two weeks using a four-period moving average and simple exponential smoothing with $\alpha = 0.1$. Evaluate the MAD in each case. Which of the two methods do you prefer? Why?

9. a. What are some obstacles to creating a flexible workforce? What are the benefits?

Marks (6)

b. How can a firm use pricing to change demand patterns?

Marks (4)

10. Outsourcing is a popular supply chain strategy. Elaborate the reasons for and against companies that outsource their production process

PART C

(Compulsory question, the question carries 20 marks)

11. A manager is attempting to put together an aggregate plan for the coming nine months. She has obtained a forecast of expected demand for the planning horizon. The plan must deal with highly seasonal demand; demand is relatively high in periods 3 and 4 and again in period 8, as can be seen from the following forecasts:

Period	1	2	3	4	5	6	7	8	9	Total
Forecast	190	230	260	280	210	170	160	260	180	1,940

The department now has 20 full-time employees, each of whom produces 10 units of output per period at a cost of \$6 per unit. Beginning inventory for period 1 is zero. Inventory carrying cost is \$5 per unit per period, and backlog cost is \$10 per unit per period.

- a. Test whether the current work force be able to handle the forecast demand?
Marks (2)
- b. Determine the total cost of the plan, including production, inventory, and backorder costs.
Marks (8)
- c. For achieving a good MPS, a good forecast of demand is necessary. List the major forecasting techniques and state the major advantages and disadvantage of the different forecasting techniques
Marks (10)
