



CII Institute of Logistics

PGDSCM & Certificate Programs

Semester-end Examination – December 2008

SUPPLY CHAIN MANAGEMENT

Time : Three Hours

Marks : 100

Part A

Answer all questions (20 x 1 = 20 Marks)

1. A supply chain includes only the organization directly involved in supplying components needed for manufacturing. True/False
2. The replenishment cycle occurs at the distributor/manufacturer interface. True/False
3. The bullwhip effect moves a supply chain away from the efficient frontier by increasing cost and decreasing responsiveness. True/False
4. The decision phases in a supply chain include
A. production scheduling B. customer relationship management
C. supply chain operation D. supply chain orientation
E. All the above
5. Distribution is a key driver of the overall profitability of a firm
A. the addition of distribution only adds cost to supply chain
B. it directly impacts both supply chain costs and customer experience
C. it slows down the responsiveness of the supply chain
D. it cannot be developed as a supply chain strategy
6. The cycle view of a supply chain holds that the processes in a supply chain are divided into 2 categories depending on whether they are initiated in response to or in anticipation of customer orders. True/False
7. To extract maximum from e-business, firms should integrate it with their existing supply chain networks. True/False
8. The time between when a customer places an order and receives delivery is
A. response time B. product variety
C. product availability D. customer experience
E. order visibility
9. A reliable supplier has low variability of lead-time, whereas an unreliable supplier has high variability. True/False
10. The fundamental supply chain decision(s) involving the trade-off between transportation and inventory costs is (are)
A. choice of transportation mode B. inventory aggregation
C. level of customer responsiveness D. all of the above
E. both a and b
11. Supply chain planning relates to supply chain configuration and has long term impact lasting several years. True/False
12. If a mismatch exists between what the supply chain does particularly well and the desired customer needs, restructuring the supply chain only is necessary. True/False
13. The major drivers of supply chain performance are inventory, facilities and transportation only. True/False
14. The goal of network design is to maximize the supply chain's long-term profitability. This is possible by having a well laid out business strategy. True/False
15. If a product has low value to weight ratio, low demand uncertainty or customer orders are small, inventory aggregation decreases supply chain costs. True/False
16. The main task of distribution in the supply chain model is the management of demand. True/False
17. _____ aligns the capabilities of suppliers, manufacturers, channel partners, service providers, and customers to develop sustainable competitive advantage:
A. e-business solution B. supply chain
C. supply chain mapping D. logistics

18. The ware house receipt is transferable by endorsement. True/False
19. Applying concepts of logistics to business conducted via the internet is called as E-fulfillment. True/False
20. Logistics audit helps in preparing strategic plans to bring efficiency and effectiveness, in to the entire logistical supply chain. True/False

Part B

Answer any four (4 x 10 = 40 marks)

1. Explain the role of major drivers of the supply chain performance.
2. Define supply chain integration process and need for creating an effective supply chain organization structure. Explain with an illustration.
3. Explain the need for demand planning and forecasting.
4. Analyze the role of 3PL service providers and the criteria required for the success of outsourcing operations.
5. What are the various modes of transportation? Explain Inter model transportation?
6. How does IT help to improve efficiency in supply chain

Part C

Answer all questions (4 x 10 = 40 marks)

CASE STUDY : Mumbai Dubbawallas

There are more than 5000 Dubbawallas who deliver 2, 00,000 Tiffin each day to offices and schools through out Mumbai. Lunch is in tiffin container consisting of number of bowls, each containing separate dish, held together in a frame. The meals are prepared in the homes of the people who commute in Mumbai each morning and delivered in their own tiffin carriers. After lunch, the process is reversed.

The meals are picked up from commuter's homes in suburbs around central Mumbai long after the commuters have left for work, delivered to them on time, then picked up and delivered home before the commuters return. Each tiffin carrier has, painted on its top, a number of symbols that identify from where the carrier was picked up, the originating and destination stations and the address to which it has to be delivered. After the tiffin carriers are picked up, they are taken to the nearest railway station, where they are sorted according to the destination station. Between 10.15 am and 10.45 am they are loaded in crates onto baggage cars of trains. At the destination station, they are unloaded by other dubbawallas and resorted, this time according to street address and floor. The 100 kg crates of carriers, carried on dubbawallas heads, hand-wagons and cycles are delivered at 12.30 pm picked up at 1.30 pm and returned to the originating place.

The charge for this extraordinary service is just Rs.150 Rs/ month, enough for the dubbawallas, who are mostly self employed, to make a good living. After paying Rs. 60 per crate and Rs 120 per man per month to the Western Railway for transport, the average dubbawalla earns about Rs.3000.Of that sum, Rs. 10 goes to Dubbawalla association. After minimal expenses, the rest of the amount that the association collects goes to a charitable trust that feeds the poor.

The Code:

Each tiffin lid was to be marked with particular code. For example NXXF where N demotes the Dubbawalla's number (assigned by the association) XX is a combination indicating the building and F is the floor number of that building where the tiffin box has to be delivered. The lid is also marked with a number denoting the railway station where the tiffin box has to be off loaded , followed by an alphabet indicating the station of pickup. Each tiffin box has a unique code. The tiffin carrier has a mark of circle or a flower and a digital identity number.

For example: K-BO-10-19/A/15

K- Identify Dubbawalla

BO- Borivali (Area from where tiffin to be collected)

10- Refers to Nariman Point area

19/A/15 – 19th building and 15th floor.

Delivery Process:

The first Dubbawalla picks up tiffin from home and takes it to nearest Railway station.

The second Dubbawalla sorts out the tiffin box at the railway station according to destination and puts them in the luggage carriage. The sorting and loading tiffins in respective trains is done between 10.15 to 10.45 am.

The third one travels with the tiffins to the railway station nearest to the destination (during 12 to 12.45)

The fourth one picks up the tiffin from the railway station and drops them at the offices (between 12.45-1.30 pm). He also collects empty tiffins to the station (starting at 2.00)

The process is reversed. Tiffins are sorted out and delivered back to the destination to the respective residences.

Six Sigma:

On an average they make one mistake in two months. This means there is one error in every 16 million transactions (one in 8 million deliveries). This is thus a six sigma performance and the percentage of correctness is 99.9999.

Is it not great that uneducated people of our country are demonstrating such a superlative quality high- speed supply chain?

Salient points as noted by Six Sigma experts are:

1. The entire process has military discipline irrespective of the scorching sun and drenching rains of monsoon.
2. Total error proof perfectionism in the total process round the year
3. The system relies on low capital and uses cycles, wooden carriages and local trains to achieve their target.
4. There are several groups that work independently and network with each other to achieve one goal.
5. They meet once a month where all groups gather and brainstorm and sort out issues.
6. They have a credit society, which gets them through money crunches.
7. Being "Anna dattas" (providers of food) they are automatically treated with respect. The Dubbawallas are service providers.
8. It is a perfect example of Customer Relationship Management (CRM) coming from an unorganized sector.

Questions:

1. What is your comment about the logistics arrangement using low capital investment?

2. What is your observation on Dubbawalla six sigma systems?
3. Write notes on codification and how Dubbawallas codification?
4. Why Dubbawallas system was recognized the best CRM example?
