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SVKM'S NMIMS UNIVERSITY
SCHOOL OF DISTANCE LEARNING

Programme: Semester: PGDSCM (IV) / ADSCM (IV)

Subject: Advanced supply chain Management

Date: 7.01.2010

TIME: 3 P.M. TO 6 P.M.

Marks: 100

Time : 3 hrs

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

Q1. Attempt any 2 out of any 4

Marks: 10

- a. What is world class supply chain management?
- b. Explain World class supply chain management triangle?
- c. Explain bullwhip effect.
- d. What do you mean by the term World class demand management?

Q2. Write Short notes on any 3 out of 5

Marks: 15

- a. Explain four stage model of world class demand management.
- b. Explain Re order point replenishment techniques.
- c. Explain four stage model of world class logistics management.
- d. What is the difference between value engineering and value analysis?
- e. What is the progression of supply chain management practice?

Q3. Attempt any 3 out of 5

Marks : 45

- a. What is the role of logistics or distribution manager?
- b. Explain lead time gap. Give one example.
- c. What are the elements of a strategic plan for world class competitiveness?
- d. "Logistics is nothing but managing the information flow in an organization". Criticise or defend this statement.
- e. A major mail order house collected data on reasons for return shipments over a three-month period with the following results. Wrong size=50,000, order

cancelled =15,000, wrong address:3000,others:15,000. Construct a pareto diagram to analyze the reasons.

Q4. Case Study

Answer in Detail

Marks : 30

This is the chain of retail stores "integrated information system". This is because of the key role it plays not only in forming this firm's corporate strategy but also in developing its functional strategies for logistic support, merchandising and store operations. The integrated information system is a symbol of the competitiveness of 7-Eleven Japan.

7-Eleven has been a convenience retailer for eight decades, and a leader in the franchise industry for more than 40 years. Today, 7-Eleven is the world's largest convenience retailer, and offers a very different franchise opportunity to operate a truly neighbourhood business with all the advantages of a global retail giant.
Neighbourhood focus:

7-Eleven is a worldwide, technology-enabled, people-driven customer service machine that understands the importance of neighborhood focus. Our technology is designed to empower Franchisees and help enhance their ability to make decisions based on what their store's customers want and need.

With more than 17000 stores in more than 20 countries, 7-Eleven is one of the largest convenience store chains in the world. It has more than 7000 stores in Japan & almost 5000 in USA. Its growth in Japan has been phenomenal, given that first 7Eleven store opened in Japan in 1974. 7-Eleven Japan is one of the profitable listed on Tokyo Stock Exchange. It has seen tremendous 'growth in sales and profitability with simultaneously decreasing its inventory relative to sales.

7-Eleven Japan's success is attributed primarily to its supply chain design with management ability.

A key reason for its success is 7-Eleven's efforts to obtain a strategic fit between its competitive strategy and its location, transportation, inventory and information strategy in supply chain.

7-Eleven aims to provide customers with what they want, when they want it. From a strategic perspective, one of the company's key objectives is to micro-match supply and demand by location, season and time of day. 7-Eleven designs and manages location, inventory, transportation and information to support this objective.

7-Eleven follows a dominant location strategy and opens new stores in target areas to establish or enhance strong presence. In Japan, e.g., 7Eleven stores are present in less than half of prefectures (roughly equivalent to a county in USA). However 7-Eleven has strong presence, with several stores in each prefecture where they are located. In USA, 7Eleven stores were not as concentrated prior to 1974. Between 1994 and 1997, 7-Eleven closed several of its stores in isolated location. Today the company targets new stores in areas that already have a strong 7-Eleven presence. This strategy is

consistent with the location strategy in Japan. This dominant location strategy allows the company the benefits of consolidation in both warehousing and transportation.

In Japan, fresh food constitutes a significant percentage of 7-Eleven sales. Most of the fresh food is cooked off site and delivered to the stores. In Japan, a store placing an order by 10 am has it delivered by dinner time the same day. There are at least 3 fresh food deliveries a day per store so that the stock can change for breakfast, lunch and dinner. All stores are electronically connected to the head office, distribution center (DCs) and suppliers. All store orders are passed on to the suppliers to package stores specific orders and deliver them to the DC. At the DC, all orders of like products (categorized by temperature at which they are maintained) from different suppliers are combined and delivered to the stores. Each delivery truck delivers to more than one store and tries to visit store during the off-pick hours. 7-Eleven Japan has made effort to have no direct store, delivery from vendors to the stores. Rather, all deliveries pass through and are aggregated at a 7-Eleven DC from which they are shipped to the stores. Note that the location strategy helps facilitate this supplier strategy.

In the USA, 7-Eleven is taking a similar approach to the one used to Japan. Fresh foods are being introduced into the stores. 7-Eleven has once again decided to avoid on-site cooking by having suppliers that cook the fresh foods for them. These foods are then delivered to stores on daily basis. In USA, 7-Eleven has tried to replicate Japanese models to combined DCs where product is received from suppliers and then shipped to the stores. The success of this strategy is reflected by improved performance of 7-Eleven in USA.

In both Japan and USA, 7-Eleven has invested lot of money and effort on retail information system. Scanned data are collected and analyzed. The resulting information is then available to the stores for use in ordering, product assortment and merchandising. 7-Eleven uses this information system to identify slow moving items and to analyze the performance of the new products. Information systems play a key role in 7-Eleven's ability to micro-match supply and demand.

7-Eleven has made clear choice in the design and its supply chain. Other convenience store chains have not always made the same choice. We can ask a variety of questions regarding 7-Eleven's supply chain choice and its key success factors.

- (1) What factors influence the decision regarding the opening and closing of the stores? Why does 7-Eleven choose to have preponderances of its stores in particular location?
- (2) Why has 7-Eleven chosen of site preparation of fresh foods and subsequent delivery to stores?
- (3) Why does 7-Eleven discourage direct store delivery from vendors and make an effort to move all products through combined DCs?
- (4) Where are DCs located and how many stores do each center serve? How are stores assigned to DCs?

- (5) Why does 7-Eleven combine fresh food shipments by temperature?
- (6) What point-of-sale data does 7-Eleven gather and what information is made available to store managers to assess them in their ordering and merchandising decisions? How should the information system be structured?

Keith Morrow, CIO of 7-Eleven

He indicated intentions about the supply chain as follows:

We needed better tools to allow us to reap all the possible savings. Goals laid out for this project included:

- (1) Optimizing and lowering total cost of goods.
- (2) Effectively tracking costs and avoiding budget overruns.
- (3) Centralizing sourcing and procurement operations.
- (4) Updating and replacing internally built or customized applications.

With goals clearly defined, 7-Eleven ultimately chose to go with a solution that integrated easily with its previously deployed back-end financial application - Oracle E Business.

The approach 7-Eleven took for this project was "a 100 percent out-of-the box deployment,"

While the upgrade was primarily driven by a need to streamline procurement and sourcing systems, 7-Eleven took the opportunity to engage a number of other major functionalities within the Oracle E-Business Suite, including human resources, payroll, general ledger, payables, and project costing. "Just one slice of Oracle E-Business Suite will eliminate hundreds of mainframe programs,"

Assets and project billing are not included.