UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016

COURSE NAME : SUPPLY CHAIN MANAGEMENT

COURSE CODE : BPB 32303

PROGRAMME : 3 BPA

EXAMINATION DATE : DECEMBER 2015/JANUARY 2016

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1   (a)   Discuss bullwhip effect towards supply chain management.

(10 marks)

(b)   Discuss **FIVE (5)** impacts the lack of coordination on the supply chain performance.

(15 marks)

Q2   (a)   Identify roles of transportation in supply chain.

(4 marks)

(b)   Discuss the strength and weaknesses of air transportation mode.

(6 marks)

(c)   Illustrate the transportation network below:

(i)   Milk Runs from Multiple Suppliers

(iii)   Direct Shipment to Single Destination

(15 marks)

Q3   (a)   Explain **FIVE (5)** processes involved in effective sourcing.

(15 marks)

(b)   Discuss **THREE (3)** risks of Using Third-Party sourcing in supply chain with appropriate examples.

(10 marks)

CONFIDENTIAL

Q4   (a)   List **THREE (3)** information characteristics that need to support effective supply chain decisions.

                                                      (3 marks)

        (b)

Walmart

In its relentless pursuit of low consumer prices, Walmart embraced technology to become an innovator in the way stores track inventory and restock their shelves, thus allowing them to cut costs. Technology plays a key role in Walmart's supply chain, serving as the foundation of their supply chain. Walmart has the largest information technology infrastructure of any private company in the world. Its state-of-the-art technology and network design allow Walmart to accurately forecast demand, track and predict inventory levels, create highly efficient transportation routes, and manage customer relationships and service response logistics.

For example, Walmart implemented the first companywide use of Universal Product Code bar codes, in which store level information was immediately collected and analysed, and the company then devised Retail Link, a mammoth Bentonville database. Through a global satellite system, Retail Link is connected to analysts who forecast supplier demands to the supplier network, which displays real-time sales data from cash registers and to Walmart's distribution centres.

Suppliers and manufacturers within the supply chain synchronize their demand projections under a collaborative planning, forecasting and replenishment scheme, and every link in the chain is connected through technology that includes a central database, store-level point-of-sale systems, and a satellite network. What made Walmart so innovative was that it has been sharing all these information with all their partners and back in the days, a lot of companies weren't doing that. In fact, they were using third parties where they had to pay for that information.

Walmart's approach means frequent, informal cooperation among stores, distribution centers and suppliers and less centralized control. Furthermore, the company's supply chain, by tracking customer purchases and demand, allows consumers to effectively pull merchandise to stores rather than having the company push goods onto shelves.

In recent years, Walmart has used radio frequency identification tags (RFID), which use numerical codes that can be scanned from a distance to track pallets of merchandise moving along the supply chain. As inventory must be handled by both Walmart and its suppliers, Walmart has encouraged its suppliers to use RFID technology as well. Even more recently, the company has begun using smart tags, read by a handheld scanner, that allow employees to quickly learn which items need

to be replaced so that shelves are consistently stocked and inventory is closely watched.

According to researchers at the University of Arkansas, there was a 16% reduction in out-of-stocks since Walmart introduced RFID technology into its supply chain. The researchers also pointed out that the products using an electronic product code were replenished three times as fast as items that only used bar code technology.

In addition, Walmart also networked its suppliers through computers. It entered into collaboration with P&G for maintaining the inventory in its stores and built an automated re-ordering system, which linked all computers between P&G factory through a satellite communication system. P&G then delivered the item either to Walmart distribution centre or directly to the concerned stores.

Walmart's supply chain management strategy has provided the company with several sustainable competitive advantages, including lower product costs, reduced inventory carrying costs, improved in-store variety and selection, and highly competitive pricing for the consumer. This strategy has helped Walmart become a dominant force in a competitive global market. As technology evolves, Walmart continues to focus on innovative processes and systems to improve its supply chain and achieve greater efficiency.

A close look at Walmart's supply chain and inventory operations definitely provides valuable learning points that businesses can take and apply to their own operations.

"Supply chain management is moving the right items to the right customer at the right time by the most efficient means," Beatty said in article about his experience. "No one does that better than Walmart."
The use of innovative information technology tools had benefited Walmart's supply chain management.

(i)   Outline the manner in which IT benefited Walmart's inventory management.
(12 marks)

(ii)   Analyze the impact of IT towards Walmart's supply chain performance.
(10 marks)

-END OF QUESTIONS-