



**QUALIFICATION** : BCOM HONOURS  
**MODULE** : SUPPLY CHAIN MANAGEMENT  
**CODE** : LMA8X02/LBE02X7  
**DATE** : SUPPLEMENTARY EXAMINATION  
**DURATION** : 180 MINUTES  
**TOTAL MARKS** : 140

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**EXAMINER** : DR D KUMAR  
**MODERATOR** : MR L FRANSMAN  
**NUMBER OF PAGES** : 3 PAGES

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**INSTRUCTIONS TO CANDIDATES:**

- Answer all the 10 questions
- Question papers must be handed in.
- This is a closed book assessment.
- Read the questions carefully and answer only what is asked.
- Number your answers clearly.
- Write neatly and legibly.
- Structure your answers by using appropriate headings and sub-headings.
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

## **Case Study**

This case study is about Dole foods, an International company based in Hawaii.

Founded in Hawaii in 1851, Dole Food Company, Inc., with 2010 revenues of \$6.9 billion, is the world's largest producer and marketer of high-quality fresh fruit and fresh vegetables. Dole markets a growing line of packaged and frozen foods, and is a produce industry leader in nutrition education and research. The Company does business in more than 90 countries and employs, on average, 36,000 full-time, regular employees and 23,000 full-time seasonal or temporary employees, worldwide.

Dole Food Company's worldwide team of growers, packers, processors, shippers and employees is committed to consistently providing safe, high-quality fresh fruit, vegetables, and food products, while protecting the environment in which its products are grown and processed.

Dole Packaged Foods LLC (Dole), and its affiliated companies, are leaders in sourcing, processing, distributing and marketing fruit products and healthy snacks throughout the world. Dole markets a full line of canned, jarred, cup, frozen and dried fruit products and is an innovator in new forms of packaging and processing fruit.

In Asia Pacific region, Dole has a cannery in Thailand. The cannery sources the pineapple from the local region. Other materials such as packaging and printing are centrally sourced by the regional head-office in Manila, Philippines. At this cannery, Dole produces a wide variety of finished products based on pineapple ingredients, with more than 150 SKUs. All the finished products are quality tested and stored in the factory warehouse, without any print labels. Based on the region demand (from Asia Pacific), a corresponding label is printed and attached to the pack. A set of pack is then dispatched either by road, sea or air to the respective demand destination.

Dole in 2014 financial year had revenues of \$9 billion, with cost of goods sold as \$197 million and average inventory of \$ 20 million. The account receivables were 38 days and payables were 52 days.

Demand forecasting for such an international supply chain and customer base is quite complex. Dole uses last 3 years historical data to forecast for the next 18 months. Such statistical forecast is then enriched with market intelligence and promotions. The forecast is consensually agreed and published. Different roles players are involved at various stages of the process.

### **Answer the following question based on the above case study**

- 1.1. Draw the supply chain diagram for Dole's supply chain. Indicate all the supply chain flows. (10)
- 1.2. Explain the supply chain issues faced by Dole overall supply chain. (10)

- 1.3. Draw a process flows diagram (sub-processes level) for demand forecasting for Dole. (15)
- 1.4. In your view, debate the challenges faced by Dole in demand forecasting. (15)
- 1.5. How do you propose should the demand forecasting performance of Dole be measured? (15)
- 1.6. Discuss the strategic roadmap Dole should use to create efficiency in its supply chain. (20)
- 1.7. Calculate the following for Dole for last financial year:
  - a. Inventory days (5)
  - b. Cash-to-cash cycle time (5)
- 1.8. Describe the various order fulfilment mechanisms for Dole. (15)
- 1.9. Define the bullwhip effect. How should Dole minimise its effect? (15)
- 1.10. Elaborate on possible supply chain process objective trade-offs for Dole. (15)

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