

## Management of International Operations (MB3H2OP): January 2009

### Section A : Basic Concepts (30 Marks)

- This section consists of questions with serial number 1 - 30.
- Answer all questions.
- Each question carries one mark.
- Maximum time for answering Section A is 30 Minutes.

1. Information must be communicated so that each actor in the logistics chain may translate downstream demand into internal operation tasks. Which of the following is not included in the planning process for the logistics

chain at the distributor's or service provider's level?

- (a) Forecast demand for finished products
- (b ) Flow management in the stores
- (c) Planning of warehouse-to-store transportation
- (d ) Warehouse flow management
- (e) Production planning.

2. To analyze the causes of shortages in inventory, factors related to both the producer and the distributor should

be measured. Which of the following is not a producer factor measuring the potential causes of shortages in supply?

- (a) Inventory level
- (b ) Promotion management
- (c) Lack of reliable forecasting
- (d ) Practice of speculative purchasing
- (e) Unreliability of suppliers.

3. Which of the following dimensions is/are affected by the outsourcing function due to its direct involvement

with the inbound logistics?

- I. Geographical dimension.
- II. Functional dimension.
- III. Sectorial dimension.

- (a) Only (I) above
- (b ) Only (II) above
- (c) Only (III) above
- (d ) Both (I) and (II) above
- (e) Both (II) and (III) above.

4. The importance of which of the following components of the global cost forces is diminished due to

advancement in technology?

- (a) Direct labor cost
- (b ) Capital costs
- (c) Taxes
- (d ) Total quality costs

(e) Government subsidies.

5. Which of the following is the stage in designing the flow management system that consists of rules and

procedures that control the execution of the required steps?

- (a) Logistics considerations in product design
- (b) Setting objectives
- (c) Designing the information systems
- (d) Design of a physical system
- (e) Designing the management system.

6. A comprehensive operations and logistics strategy made up of various decision categories is further classified into structural and infrastructural decisions. Which of the following structural decisions may be focused by

geography, product group, process type, or stage in the product life cycle?

- (a) Operations process technology
- (b) Facilities network
- (c) Distribution planning and control
- (d) Logistics process technology
- (e) Vertical integration.

7. Distribution channels have been the subject of significantly important theoretical developments from different

schools of thought. Which of the following statements is/are true relating to the approaches to the distribution channels?

I. The functional view of distribution channels attempts to answer questions such as should freight and warehousing be entrusted to an agent within their own structure or should they be contracted out to a logistics firm.

II. The consumer utility model relies on macroeconomic paradigms, the focal point of which is the equilibrium between market and resource allocation.

III. The postponement and speculative model put forth an analysis of the intermediary's margin associated with the degree of risk related to speculative gain.

- (a) Only (I) above
- (b) Both (I) and (II) above
- (c) Both (I) and (III) above
- (d) Both (II) and (III) above
- (e) (I), (II) and (III) above.

8. The bullwhip effect that is a common phenomenon in many industries is taught in many business schools and

industrial engineering departments using an effective experiential game called the beer game.

Which of the following statements relating to the beer game is not true?

- (a) It simulates the flow of material and information in a simplified channel of production and distribution
- (b) Orders placed by each of the stage managers, as well as the inventory in transit and at each stage are represented by markers and pennies
- (c) The four stages in the beer supply chain include factory, distributor, wholesaler and retailer
- (d) External demand is represented by pennies
- (e) The factory schedules production by generating a production request.

9. Which of the following changes in consumer behavior that have caused manufacturers, wholesalers, and retailers

to adapt their strategies and organization structure in order to meet new expectations represents an end to the era of standard products giving rise to the era of extreme product customization?

- (a) Individualism
- (b) Time-based competition
- (c) Environmentalism
- (d) Global products
- (e) Local marketing.

10. Foreign exchange fluctuations affect a company's financial performance. Which of the following statements

represent the exposure that is most important to operations managers?

- I. It arises by changing the domestic currency value of net assets held in foreign currency.
  - II. It arises by changing the domestic currency value of future cash flows to be earned in foreign currencies or by changing a firm's future competitive position.
  - III. It is driven by fluctuation of the nominal exchange rates.
  - IV. Substantial price pressures in the marketplace with limited effects on a firm's cost structure imply a large negative impact on this exposure.
- (a) Both (I) and (III) above
  - (b) Both (II) and (IV) above
  - (c) (I), (II) and (III) above
  - (d) (I), (III) and (IV) above
  - (e) (II), (III) and (IV) above.

11.

Which of the following areas of decision making in the development of financial strategy involves accounting procedures, measures of financial performance, scope of treasury function and requires information systems support?

- (a) Managerial infrastructure
- (b) Risk management

- (c) Working capital management
- (d ) Capital budgeting
- (e) Equity management and dividends policy.

12. Which of the following statements is/are true relating to the dominant theory in international production based

on the concept of an international product life cycle?

- I. Under this theory, a company introduces a product in one or several developed-country markets.
  - II. The company begins shipping it to developing-country markets when the product enters the growth stage of its life cycle in these markets.
  - III. This strategy regenerated or extended the product's total life cycle by sequentially cultivating markets that lagged behind in customer needs.
- (a) Only (I) above
  - (b ) Both (I) and (II) above
  - (c) Both (I) and (III) above
  - (d ) Both (II) and (III) above
  - (e) All (I), (II) and (III) above.

13. Which of the following is not true regarding the Japanese model to supply chain management?

- (a) It uses multiple criteria rather than emphasizing on price
- (b ) It encourages fewer selected suppliers
- (c) It enables sharing of the improvement benefits based on relative power
- (d ) It involves quasi-vertical integration
- (e) It encourages joint solving of the problems.

14. Use of third-party logistics providers' is not a risk-free proposition. Which of the following risks is/are built-in

risks when outsourcing logistics to a third-party firm?

- I. Strategic risk.
  - II. Environmental risk.
  - III. Commercial risk.
  - IV. Management risk.
- (a) Only (I) above
  - (b ) Both (I) and (IV) above
  - (c) (I), (II) and (IV) above
  - (d ) (I), (III) and (IV) above
  - (e) All (I), (II), (III) and (IV) above.

15. Modularization and postponement concepts used in product and process design focus on the advantages of

economies of scale and scope. Which of the following correctly represent these concepts?

- I. Modularization is a product design approach in which the product is assembled from a set of standardized constituent units.
- II. Postponement is a value-addition process for a set of end products that maximizes the common processing requirements shared by those products.
- III. Modularization is associated with outbound logistics.
- IV. Postponement can be either time or form postponement.

- (a) Both (I) and (II) above
- (b ) (I), (II) and (III) above
- (c) (I), (II) and (IV) above
- (d ) (II), (III) and (IV) above
- (e) All (I), (II), (III) and (IV) above.

16. Management of global operations and logistics differs from management of domestic operations in several ways. One of the ways to manage the global operation is to identify and analyze factors that differ across nations that influence the effectiveness of these functions. Which of the following are those factors?

- I. Worker productivity.
- II. Process adaptability.
- III. Transportation availability.
- IV. Distribution.

- (a) Both (I) and (II) above
- (b ) Both (II) and (III) above
- (c) Both (III) and (IV) above
- (d ) (I), (II) and (III) above
- (e) (II), (III) and (IV) above.

17. Which of the following statements relating to the types of integration in the global operations and logistics are

true?

- I. Implementing worldwide sourcing and selling in multiple markets refer to geographical integration.
- II. Functional integration improves flow management.
- III. Efficient Customer Response (ECR) has been one of the first successful attempts at functional integration.
- IV. Sectorial integration ensures cross-boundary cooperation resulting in effective coordination of promotions and negotiations.

- (a) Both (I) and (II) above
- (b ) Both (II) and (III) above
- (c) Both (II) and (IV) above
- (d ) (I), (II) and (IV) above
- (e) (II), (III) and (IV) above.

18. Which of the following statements are false relating to the deep-pocket investment strategy?

- I. It is an alternative to the dependence on dominant foreign suppliers.
- II. It involves developing component production capabilities in-house.
- III. The need to have access to critical technological components for their products forces firms to adopt this strategy.
- IV. It is cost effective but not risky.

- (a) Both (I) and (II) above
- (b ) Both (II) and (III) above
- (c) Both (III) and (IV) above

- (d ) (I), (II) and (III) above
- (e) (II), (III) and (IV) above.

19. Which of the following is/are not considered as key competitive ingredient(s) of a global marketing strategy

traditionally?

- I. Product.
- II. Place.
- III. Price.
- IV. Promotion.
- (a) Only (I) above
- (b ) Only (II) above
- (c) Only (IV) above
- (d ) Both (II) and (IV) above
- (e) Both (III) and (IV) above.

20. Logistics Information and Telecommunications System (LITS) is intended to satisfy multiple user needs, with

four main logistics users being identified. Which of the following statements is false?

- (a) Aggregate data will suit the requirements of the top logistics-level management
- (b ) At the local logistics level, responsibilities correspond to a medium-term monitoring prospect
- (c) Operational mid-level management is responsible for specific logistics activities
- (d ) Information needs at the basic logistics operations level are most detailed requiring lot of data entry

throughout the logistics information system

- (e) Planning logistics activities on the basis of a yearly budget per country is a basic function of the information system intended for the operational mid-level management.

21. Which of the following characteristics of indicators for effective metrics enables successive aggregates of data

for measuring performance in functional integration?

- (a) Cumulative
- (b ) Linkage with other indicators
- (c) Coherence
- (d ) Simplicity
- (e) Objectivity.

22. Which of the following statements does not represent the factors influencing hysteresis band correctly?

- (a) An increase in the switchover costs leads to an increased hysteresis band
- (b ) Higher the market power of the firm in the foreign market, the more the foreign direct investment strategies are favored
- (c) Increased volatility of the exchange rates leads to an increased hysteresis band
- (d ) Production cost advantages in the home country favor direct investment in production

facilities, while

cost advantages in the foreign market favor exporting strategies

(e) An increased foreign market demand provides favorable conditions for earlier switching to an exporting strategy in the case of a depreciated home currency.

23. The different stages in the life cycle of a product result in a change in the principal competitive requirement

for outsourcing priorities. Which of the following stages consider(s) delivery reliability as a key factor?

I. Initial phase.

II. Growth phase.

III. Mature phase.

IV. Phase of rapid market growth.

(a) Only (I) above

(b) Both (I) and (III) above

(c) Both (II) and (IV) above

(d) (I), (II) and (III) above

(e) (II), (III) and (IV) above.

24. Which of the following represents the country environment that helps the long-term economic viability of

vertical integration investments?

(a) Market size and growth

(b) Labor cost

(c) Labor skill

(d) Local managerial capacity

(e) Line diversity.

25. If the spot rate of the Indian Rupee equivalent to US dollar is 49.52 and the forward rate 90 days hence is 50.14,

the Indian dealer in the foreign market is purchasing a US dollar at a premium of

(a) 3.913 %

(b) 4.346 %

(c) 5.008 %

(d) 6.981 %

(e) 4.946 %.

26. Which of the following views of management relating to the strategic role of operations and logistics is true?

(a) Top management views the operations and logistics as strategic in nature

(b) Top management views internal environment as the primary key to corporate success

(c) Operations and logistics managers are evaluated and rewarded on their performance on short-term

numbers and are offered little incentive to focus on long-term performance goals

(d) Operations and logistics participates in the decision process for an overall integration

(e) The systems approach to managing a global enterprise views operations and logistics as the source for

competitive advantage.

27. Which of the following barriers to international trade is classified as the most common non-tariff barrier?

- (a) Taxes imposed on imported goods
- (b) Quota
- (c) Voluntary export restraint
- (d) Trigger price mechanisms
- (e) Local content requirements.

28. Services provided by logistics firms and third-party logistics are divided into various types. Which of the

following is not one of the types?

- (a) Basic services
- (b) Proximity services
- (c) Physical contract logistics services
- (d) Management contract logistics services
- (e) Integrated contract logistics.

29. Which of the following approaches helps in evading forward buying nature of organizations?

- (a) Efficient Consumer Response
- (b) Supplier Retailer Collaboration
- (c) Electronic Data Interchange
- (d) Quick Response
- (e) Individualism.

30. Companies use the product family focus option for focusing their facility networks to meet the competitive

priorities of the various products at the various markets. Which of the following is an advantage of this option?

- (a) Transportation economies
- (b) Significant exchange rate management
- (c) More standardized quality of product
- (d) High level of final product inventory
- (e) Well coordinated production.

END OF SECTION A

Management of International Operations (MB3H2OP): January

2009

Section B : Caselets (50 Marks)

- This section consists of questions with serial number 1 – 6.
- Answer all questions.
- Marks are indicated against each question.
- Detailed explanations should form part of your answer.
- Do not spend more than 110 - 120 minutes on Section B.

Caselet 1



Read the caselet carefully and answer the following questions:

1. CVS realized that choosing inter-enterprise connectivity leveraging existing enterprise applications in combination with Descartes' connectivity via XML, EDI, Webforms, and e-mail would derive it the desired benefits. In this context, explain the ( 8 marks)

significance of technologies like EDI to meet the integration challenges of globalization and the advantages derived by using EDI.

2. Discuss the challenges faced by CVS in managing its deliveries and the solution provided by Descartes. Also discuss the benefits d erived through the solution. ( 8 marks)

CVS, America's leading pharmacy, leverages Descartes' solutions to improve inbound supply chain visibility. A third-party analysis projected an estimated potential reduction in inventory of up to 17% over a 12-month p eriod following enterprise-wide implementation by: using exception alerts to improve logistics execution, preventing order failures throug h proactive monitoring o f inbound shipments and collaborating with sup ply chain partners to decrease order cycle times.

CVS is America's #1 pharmacy, dispensing more retail prescriptions in more stores than any other chain. With annual revenues of more than \$22 billion, CVS has created innovative approaches to serve the healthcare needs of its customers throug h more than 4,100 CVS/pharmacy stores; CVS ProCare, its specialty pharmacy business; CVS.co m, its online pharmacy; and Pharmacare, its pharmacy benefit management company.

To better manage hundreds of thousands of deliveries from approximately 22,000 origin p oints annually, CVS/ pharmacy has a goal to improve inbound supply chain visibility by automating co nnections with hundreds of sup pliers and carriers. Like most retailers, CVS needs up-to-the-minute answers to critical questions such as - has the purchase o rder been confirmed, what is the shipment status, what is the carrier's estimated time of arrival?

Prior to teaming with Descartes, CVS follo wed the industry practice of relying heavily on historical data and safety stock to protect its 4,100 stores and nine distribution centers against costly inventory sho rtages.

CVS selected Descartes as a technolo gy p artner after a third-party ROI study projected an estimated p otential reduction in inventory of up to 17% over a 12-month period following enterprise-wide implementation of Descartes Visibility and Event Management solution.

However, CVS only required a one-day inventory reduction to build a business case for the solution. CVS realized that a global visibility solution could not be achieved using its existing enterprise resource planning (ERP), wareho use or transportation management applications. Instead, they chose inter-enterprise connectivity, leveraging existing enterprise applications in combination with Descartes' connectivity via XML, EDI, Webforms, and e-mail.

CVS plans to integrate all of its top 50 suppliers and applicable carriers, and then exp and the implementation to include 8 0-90% of all inbound volume. Acco rding to Kevin Smith, Senior Vice President of Supp ly Chain and Logistics for CVS/pharmacy, "We anticipate significant payback through netwo rk cost savings and business process imp rovements. These enhancements and savings will only grow as we continue to op timize our new inbound process."

By monitoring inventory movement and receiving automatic alerts, CVS will be able to proactively manage supply chain events and prevent order failures. The resulting reduction in safety stock and order cycle times, along with improvements in logistics execution, will ultimately lead to improved logistics execution and overall profitability.

"We saw the value in connecting to Descartes' network rather than developing our own visibility systems internally, especially since Descartes' solution could be implemented relatively quickly and scale in conjunction with our existing legacy systems," Smith says.

END OF

## CASELET 1

### Caselet 2

Read the caselet carefully and answer the following questions:

3. General Motors (GM) being a global organization faced additional complexities and uncertainties in its operations. Discuss the infrastructural inadequacies faced by an organization operating in the global environment.

( 8 marks)

4. Discuss what according to Penske Logistics were the challenges faced by GM's Mexican subsidiary (GMM) and measures suggested by Penske Logistics to solve the inefficiencies at GMM as observed through its analysis. Also discuss the benefits derived by GMM.

( 8 marks)

GMM is GM's Mexican subsidiary and a vital part of GM's North American operations. The company works with more than 1,700 suppliers that produce approximately 13,000 parts a day. From railcars to chartered planes, the company's transportation network is both sophisticated and complex. With a reach that extends to more than 60 countries, logistics is no small challenge for GM. GMM selected Penske Logistics to be its lead logistics provider (LLP) in 2002. The fit was a natural one - at the time, Penske Logistics had served as LLP for several of GM's U.S. operations and had managed border crossings in Laredo, Texas for nearly two decades. With an acute understanding of the Mexican culture and GMM's operating principles, Penske Logistics had a head start on helping GMM derive efficiency throughout all aspects of its distribution network. Within the first six months of partnership, transportation costs reduced significantly. And, more improvements were underway including the implementation of proprietary software to provide instant access to real-time updates from every supply chain participant.

Prior to 2002, GMM internally managed its complex transportation network, which consisted of eight operations on three sites in Ramos, Toluca and Silao. As higher demands continued to be placed on GMM's production and distribution operations, its transportation network lacked collaboration. In effect, each operation was making individual logistics decisions, creating costly redundancies and inefficiencies throughout the supply chain.

As LLP, Penske was challenged with reducing costs and improving efficiency in GMM's inbound transportation operations. Penske would now manage the inbound transportation of materials to each of the plants, as well as manage GMM's carrier relationships.

Penske presented a three-phase plan to be implemented within the first year with the first phase emphasizing on benchmarking with a span of 90 days, in which Penske would conduct a comprehensive study of GMM's inbound transportation operations, including processes, infrastructure and personnel. In the second phase spanning 90 days, the focus was on process design and engineering where the new procedures would be developed based on inefficiencies and benchmarks discovered in the first phase. The third phase spanning 180 days focused on the implementation, in which Penske would implement these new procedures, ensuring full ramp-up in all three plants.

The phased plan began in February 2002, where Penske closely studied every aspect of GMM's inbound transportation operations. From carrier negotiation to routing, each individual activity within the plants was process-mapped to identify inefficiencies.

The conclusion was two-fold. Penske determined that GMM lacked overall supply chain visibility as well as quality control measures. GMM could not accurately forecast inventory needs at plants or monitor carrier progress. Carriers lacked an efficient way to communicate the status of inbound shipments to plant operators. Plant operators were spending valuable time tediously tracking carrier status. Furthermore, there was no way to effectively identify low performers within the supply chain and hold them accountable to their actions. With the benchmarking phase complete, Penske outlined its plan for operational improvement. Penske would implement its proprietary Logistics Management System (LMS).

END OF

CASELET 2

Caselet 3

Read the caselet carefully and answer the following questions:

5. Discuss the challenges faced by Leggett & Platt relating to information processing and the reason for adopting the Descartes solution. Also discuss the benefits derived through the logistics management solutions provided by Descartes. ( 10 marks)

6. Descartes has provided a solution to Leggett & Platt using the logistics information and telecommunications system framework. Discuss the characteristics that a company like Descartes should consider for providing a logistics information and telecommunications solution. ( 8 marks)

Leggett & Platt is a diversified developer and manufacturer of engineered steel components and products that can be found in virtually every home, office, retail store, and automobile. With 2007 sales of \$4.3 billion, the 125-year-old company serves a broad suite of customers that comprise a "Who's Who" of manufacturers and retailers. It has 22 business units, 24,000 employee-partners, and more than 250

facilities in 20 countries.

Leggett & Platt serves thousands of customers in 100 countries around the globe, and works with 10 carriers, including five major carriers in Asia and additional niche carriers for its South American, Australian and European import, export and foreign-to-foreign activities. Despite the scale of its shipping activities, Leggett & Platt was using manual processes and spreadsheets for tracking shipments being made by its ocean carriers.

According to Wayne Kaminski, Director of International Logistics at Leggett & Platt, having access to timely information on ocean shipments was becoming a necessity. "We wanted up-to-the-minute tracking so we could get a better idea of when shipments would reach their final destination. Even though some carriers had improved their reporting processes to include some level of automation, we still had to transfer information from 10 different carriers into 10 spreadsheets." He notes that because of this manual processing, even very routine information was often inaccurate or was simply not recorded at all. "We had lots of instances where things went astray. At other times, containers would just show up because some carriers did not provide tracking capabilities. Arrival notices were also coming in from all over the place and everyone was trying to direct carriers on how they should set up their bill of lading." Adding to the challenge was the fact that the company had little insight into foreign-to-foreign shipments (e.g. Asia to Australia, or Asia to Europe). "With all international business being handled out of Chicago, our visibility into foreign shipments was limited," says Kaminski.

Customer service was also impacted. He adds, "With thousands of customers and 250 branches to deal with, providing the correct information was tough. We definitely needed better visibility into the entire process, and an easy way to centralize and standardize our shipment processes and capture information electronically from our carriers."

To gain greater control over all aspects of its ocean deliveries, Leggett & Platt implemented a number of logistics management solutions provided by Descartes. Among the Descartes' solutions being used today by Leggett & Platt is Descartes Rate Builder, which leverages the Descartes Global Logistics Network (GLN) to enable electronic information exchange with carriers. Today, eight of 10 carriers and freight forwarders used by Leggett & Platt can be accessed through the Descartes GLN. Descartes Rate Builder is used to automate and manage ocean freight audit functions. "Previously, we had an audit process in place for about 25% of all shipments," explains Kaminski. "Today that's increased to 80%." By automating audit functions, Leggett & Platt has reduced the amount of cash payments made in error and the time spent recouping those funds. Error rates of 10% to 15% on bills of lading have been virtually eliminated as they now get audited and corrected prior to payment. In addition, shipment status messages are automatically updated in the Descartes Multimodal Track and Trace application. Previously, multiple spreadsheets were used to track shipments, but they were only available to a limited number of staff in one or two offices. Today, Descartes' Multimodal Track and Trace is accessed online by 225 users, including employees at Leggett & Platt's Chicago office and branches around

the globe.

"Employees at our branches no longer need to call us to check the status of their containers. Now someone can log in from an office in China to check the status of a shipment – regardless of the carrier – any time of day or night. Before, they may not have been able to reach anyone because of the time difference," says Kaminski.

"Descartes essentially provides us with a single version of the truth through a single

point of contact, which in turn enables us to deliver better customer service." In addition, Leggett & Platt has been working with Descartes on improving and standardizing its customs compliance functions. "In the past, branches were using every freight forwarder possible," says Kaminski. "Having visibility has allowed us to centralize customs compliance through just a handful of corporate approved brokers and forwarders." According to Kaminski, the improved visibility into shipment status also has provided the ability to prepare reports on its shipping operations in a timely and accurate manner through Descartes Reporting Services. "Reporting was once a manual process where we had to manipulate information captured on spreadsheets, but now we can gather information and run reports at the click of a button."

Comprehensive reporting capabilities have played a key role in improving Leggett & Platt's bid process. "We have an average of 25,000 to 30,000 containers being shipped annually through 1,000 different trade lanes, from Shanghai to Santos, Brazil. It used to take months to gather information from the different trade lanes," explains Kaminski. "But with real time insight into volumes that each carrier is shipping and other essential data, we now have a stronger bargaining chip when negotiating new rates and contracts with carriers."

According to Kaminski, since Leggett & Platt began working with Descartes, "We are constantly getting compliments from branch offices and customers on how our responses have improved dramatically. Descartes has brought us to another level where we now have a world class supply chain throughout the entire corporation."

END OF

CASELET 3

END OF SECTION B

Section C : Applied Theory (20 Marks)

- This section consists of questions with serial number 7 - 8 .
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 25 -30 minutes on Section C.

7. Effective flow management in an organization requires focusing on the primary environmental factors that affect the design and management of a logistics system. In this context, explain the different stages involved in setting up an effective flow management system.  
( 10 marks)

8. A framework has been developed and labeled as the 'Strategic Importance and Criticality Matrix' to determine whether the manufacturing parts should be produced in-house or by an outside vendor. Explain the framework. ( 10 marks)