**Chapter 1—Introduction to Supply Chain Management**

**TRUE/FALSE**

1. According to the textbook, the keys to successful supply chain management include trust, cooperation, collaboration and honest, accurate communications between supply chain partners.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Knowledge Difficulty: Easy

2. Supply chain management is concerned about how suppliers’ products are designed, produced, and transported.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Knowledge Difficulty: Easy

3. One definition of supply chain management is "Coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers."

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Knowledge Difficulty: Easy

4. The universally accepted definition of supply chain management is "the management and integration of the parties involved in producing the end items coveted by consumers."

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Comprehension Difficulty: Easy

5. The assembly or production of finished products, producing the right amount of product, and ensuring that finished products meet specific quality, cost, and customer service requirements can all be considered elements of operations.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Comprehension Difficulty: Easy

6. According to the textbook, supply chains include raw material suppliers, intermediate component manufacturers, end-product manufacturers, wholesale distributors, retailers and end-product consumers.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

7. Trucking companies, airfreight shipping companies, and information system providers can all be considered service providers to the supply chain.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

8. According to the textbook, a supply chain's end customers are the only true source of income for all supply chain organizations.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

9. The foundation elements of supply chain management are Supply. Operations, Customer Service, Logistics.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Comprehension Difficulty: Easy

10. Supply chain management activity includes managing the various compensation and benefit programs within an organization.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

11. Highly valued customers with large purchasing budgets who achieve moderate supply chain management success have been known to lower purchasing and inventory carrying costs, and create better quality products with higher levels of customer service.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

12. Many large firms are moving to in-house vertically integratedstructures where they have more control over each business unit.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Comprehension Difficulty: Easy

13. Supply chain analytics can be used along the supply chain to schedule production according to expected supplier deliveries

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Analysis Difficulty: Easy

14. According to the textbook, in the 1950's and 1960's, mass production techniques focused on creating supplier partnerships, improving process design and flexibility, and improving product quality.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

15. According to the textbook, third-party logistics providers (3LPs) do not offer assistance with helping products clear customs.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

16. According to the textbook, environmental and social impacts are considered outside of supply chain management.

ANS: F PTS: 1 REF:

BUSPROG: Diversity LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

17. Trends in supply chain management include expansion of the supply chain and decreasing supply chain visibility.

ANS: F PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

18. According to the text, supply chain management will involve cultural change among most or all of the participants.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

19. The bullwhip effect causes an amplification of the variation in the demand pattern along the supply chain.

ANS: T PTS: 1

BUSPROG: Analytic LO: 1-5 Bloom’s: Knowledge Difficulty: Easy

20. The bullwhip effect is the result of companies producing excessive defective products; defective items are whipped back from the end customer toward the manufacturer of the defect.

ANS: F PTS: 1

BUSPROG: Technology LO: 1-5 Bloom’s: Analysis Difficulty: Easy

**MULTIPLE CHOICE**

1. When a particular item is in short supply accompanied by rising prices, a firm might find it beneficial to:

|  |  |
| --- | --- |
| a. | Discontinue buying the product and focus more on cheaper products. |
| b. | Align itself with one of the suppliers to ensure a continued supply of the scarce item. |
| c. | Purchase the item from a manufacturer who cuts corners and provides a product below market price. |
| d. | All of these |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Comprehension Difficulty: Easy

2. Supply chain management includes the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. It also includes:

|  |  |
| --- | --- |
| a. | Human resources and job design |
| b. | Selling and marketing products |
| c. | Coordination and collaboration with channel partners |
| d. | Program evaluation and review techniques. |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Knowledge Difficulty: Easy

3. Which company is experimenting with the management of the final mile of delivery in some markets, using small aerial drones to deliver shoebox-size packages from fulfillment centers?

|  |  |
| --- | --- |
| a. | FedEx |
| b. | UPS |
| c. | Zappos |
| d. | Amazon |

ANS: D PTS: 1

BUSPROG: Analytic LO: 1-1 Bloom’s: Knowledge Difficulty: Easy

4. According to the textbook, conditions which must be present for successful supply chain management include:

|  |  |
| --- | --- |
| a. | Cooperation among firms |
| b. | Corporate contracts regarding performance expectations |
| c. | Short-term company focused performance |
| d. | Vertical Integration |

ANS: A PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

5. According to the text, the FOUR important elements of the supply chain are:

|  |  |
| --- | --- |
| a. | Purchasing, manufacturing, transportation, retail stores |
| b. | Supply, operations, logistics, integration |
| c. | Purchasing, manufacturing, logistics, transportation |
| d. | Supply, operations, manufacturing, distribution |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

6. Encouraging or helping a firm's suppliers to perform in a desired fashion can be referred to as:

|  |  |
| --- | --- |
| a. | Progressive procurement |
| b. | Supplier management |
| c. | Right-shoring |
| d. | Supply chain performance management |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

7. Which of the following activities would fall under the foundational element of operation?

|  |  |
| --- | --- |
| a. | Distribution network |
| b. | Supplier management |
| c. | Demand management |
| d. | Third-party logistics services |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-2 Bloom’s: Knowledge Difficulty: Easy

8. One operational method for managing inventory is the implementation of a software system which can be referred to as:

|  |  |
| --- | --- |
| a. | Material requirements planning (MRP) |
| b. | Demand capacity tracking (DCT) |
| c. | Inventory sourcing (IS) |
| d. | Demand process reengineering (DPR) |

ANS: A PTS: 1

BUSPROG: Technology LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

9. Which of the following activities allows buyers to assume the supplier will meet certain product quality and service requirements?

|  |  |
| --- | --- |
| a. | Business process reengineering |
| b. | Right-shoring |
| c. | Supplier certification |
| d. | Distribution network |

ANS: C PTS: 1

BUSPROG: Technology LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

10. According to the textbook, the order of product & service flow is as follows:

|  |  |
| --- | --- |
| a. | Raw material supplier, retailer, component manufacturer, wholesale distributor, end product manufacturer, end-product consumer |
| b. | Raw material supplier, component manufacturer, retailer, wholesale distributor, end product manufacturer, end-product consumer |
| c. | Component manufacturer, raw material supplier, retailer, wholesale distributor, end product manufacturer, end-product consumer |
| d. | Raw material supplier, component manufacturer, end product manufacturer, wholesale distributor, retailer, end-product consumer |

ANS: D PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

11. Which of the following is a reverse logistics activity:

|  |  |
| --- | --- |
| a. | Delivering finished goods to your customer |
| b. | Recycling products and components |
| c. | Developing a collaborative relationship with your supplier |
| d. | Managing the quality of products |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

12. Which of the following would be considered a third party provider?

|  |  |
| --- | --- |
| a. | A Raw materials supplier |
| b. | An intermediate component manufacturer |
| c. | A firm that leases storage warehousing |
| d. | An end product manufacturer |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

13. Which of the following statements is TRUE?

|  |  |
| --- | --- |
| a. | Supply chain management was invented by the auto manufacturing industry |
| b. | Strategic partnerships are seen as one of the foundations of supply chain management |
| c. | Purchasing is seen as the final and most difficult step in the supply chain |
| d. | Service response logistics is the digital distribution of services |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

14. Which of the following acronyms is NOT paired with its correct "translation?"

|  |  |
| --- | --- |
| a. | TQM  Total Quality Management |
| b. | JIT  Just-in-Time |
| c. | TLS  Third-party Logistics Services |
| d. | ERP  Enterprise Resource Planning |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

15. Lean production is typically associated with which of the following company's production systems?

|  |  |
| --- | --- |
| a. | Proctor and Gamble |
| b. | Kraft |
| c. | Samsung |
| d. | Toyota |

ANS: D PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

16. Customer relationship management, distribution network, transportation management, and service response logistics are all important issues that are most closely related to:

|  |  |
| --- | --- |
| a. | Purchasing |
| b. | Logistics |
| c. | Integration |
| d. | Manufacturing |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Comprehension Difficulty: Easy

17. The following strategy is usually employed by lean organizations in an effort to ensure continued quality compliance among suppliers and with internal production facilities:

|  |  |
| --- | --- |
| a. | Six Sigma |
| b. | MRP II |
| c. | 3PL |
| d. | CAPS |

ANS: A PTS: 1

BUSPROG: Analytic LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

18. Which of the following can be defined as “The ability to meet the needs of current supply chain members without hindering the ability to meet the needs of future generations”.

|  |  |
| --- | --- |
| a. | Reverse logistics |
| b. | Enterprise resource planning |
| c. | Sustainability |
| d. | Strategic partnerships |
|  |  |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Comprehension Difficulty: Easy

19. According to the text, which of the following is considered a current trend in supply chain management?

|  |  |
| --- | --- |
| a. | Using supply chain analytics |
| b. | Increasing supply chain visibility |
| c. | Both A and B |
| d. | None of these |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Comprehension Difficulty: Easy

20. Developed in the 1990’s as a popular way of developing radically new business processes in an effort to reduce waste and increase performance is referred to as:

|  |  |
| --- | --- |
| a. | Process integration |
| b. | Benchmarking |
| c. | Business process reengineering |
| d. | Vertical integration |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

21. The term Supply Chain Management and the field of study it represents today seems to have emerged in the:

|  |  |
| --- | --- |
| a. | 1960's |
| b. | 1970's |
| c. | 1980's |
| d. | 1990's |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Knowledge Difficulty: Easy

22. An internal or external event that causes a disruption or failure of supply chain operations is an example of

|  |  |
| --- | --- |
| a. | Bull-whip effect |
| b. | Back-shoring |
| c. | Supply chain risk |
| d. | Six Sigma quality management |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-4 Bloom’s: Comprehension Difficulty: Easy

23. Which of the following can happen as a result of the bullwhip effect?

|  |  |
| --- | --- |
| a. | Increase in defective products |
| b. | Excess costs for each firm in a supply chain |
| c. | Decreased levels of safety stock |
| d. | Quicker distribution to warehouses |

ANS: B PTS: 1

BUSPROG: Analytic LO: 1-5 Bloom’s: Comprehension Difficulty: Easy

24. The continuing cycle of erratic demand causing forecasts to include safety stock which in turn magnify supplier forecasts and cause production planning problems is known as:

|  |  |
| --- | --- |
| a. | Supply chain management |
| b. | Process integration |
| c. | Back-shoring |
| d. | Bullwhip effect |

ANS: D PTS: 1

BUSPROG: Analytic LO: 1-5 Bloom’s: Comprehension Difficulty: Easy

25. The following is an example of the bullwhip effect:

|  |  |
| --- | --- |
| a. | Barkley's produces a defective product and thus realizes an excessive increase in consumer returns |
| b. | Barkley's products are so successful that it adds a new retailer for distribution |
| c. | Barkley's incorrectly anticipates consumer demand resulting in stockouts at several popular retailers |
| d. | Barkley's is unhappy with the performance of a distributor which causes a chain-reaction of replacements to companies involved in its supply chain |

ANS: C PTS: 1

BUSPROG: Analytic LO: 1-5 Bloom’s: Application Difficulty: Easy

**SHORT ANSWER**

1. There are many definitions for supply chain management. a. Define supply chain management in your own words. b. What is the goal of supply chain management?

ANS:

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| --- | --- |
| a. | Supply chain management is managing the activities involved in sourcing, production, and distribution of products. It is also involved in coordinating or integrating a number of goods- and services-related activities among supply chain participants. |
| b. | The goal of supply chain management typically involves improving operating efficiencies, increasing quality of products and strengthening customer service among the collaborating organizations. |

PTS: 5

BUSPROG: Communication LO: 1-1 Bloom’s: Comprehension Difficulty: Moderate

2. Explain the concept of 'value-enhancing benefits' by giving THREE examples of benefits that may be realized by a firm that successfully manages its supply chain.

ANS:

|  |  |
| --- | --- |
|  | ***Benefits from successfully managing the supply chain*** |
| a. | Lower purchasing and inventory carrying costs |
| b. | Better product quality |
| c. | Higher levels of customer service |
| d. | Increase in sales. |

PTS: 5

BUSPROG: Communication LO: 1-2 Bloom’s: Comprehension Difficulty: Moderate

3. Briefly explain how technology has impacted supply chain management? Give three examples.

ANS:

|  |  |
| --- | --- |
|  | ***How technology has impacted supply chain management*** |
| a. | Shipments can be tracked and monitored using technology and alerts sent to shippers about items that are in transit and delivered. |
| b. | Technology can be used to help a facility make more economic use of their utilities such as automated controls for lighting and air conditioning. |
| c. | RFID and automated storage and retrieval systems can be used to move product through a warehouse |
| d. | Inventory visibility is made easier by technology and the use of MRP and ERP systems. |

PTS: 5

BUSPROG: Technology LO: 1-4 Bloom’s: Knowledge Difficulty: Moderate

4. List three concepts used by supply chain managers in an attempt to make a firm more flexible and responsive to customers' changing needs:

ANS:

|  |  |
| --- | --- |
| a. | Agile manufacturing |
| b. | JIT |
| c. | Mass customization |
| d. | Lean manufacturing |
| e. | Quick response |

PTS: 5

BUSPROG: Analytic LO: 1-3 Bloom’s: Knowledge Difficulty: Easy

**ESSAY**

1. Discuss the differences between supply chain partnerships of the past and those that have developed today.

ANS:

In the past, supply chain partnerships did not really exist.

|  |  |
| --- | --- |
|  | Supply chains were seen as a series of independent organizations that were looked on, to perform their core competency for the sake of their downstream "partner." |
|  | Firms in the past did not seek to share information. |
|  | Buyers of supplies and services instead usually were reduced to bargain hunters. Low cost was valued over quality. |
|  | Traditional relationships were also characterized by a large number of partners and short-term contracts. This put an emphasis on low cost that would provide short-term profits versus sustainable profits that might come along with consistently high quality goods and services. |
|  | In some cases, conglomerates were formed by firms seeking more supply chain control. |

Modern supply chain partnerships are much different.

|  |  |
| --- | --- |
|  | Partnerships of today encourage sharing and collaboration from the design phase to the delivery phase. |
|  | Partners, nowadays, see each other as a chain of customers connected by their goal of pleasing the final end customer. |
|  | While cost is still an important aspect of creating value for the customer, today supply chains also focus on the importance of higher quality, more customization, and swift delivery service. |
|  | It is for this reason that modern partnerships focus on collaboration from the moment they begin to design a product until the product's lifecycle has run its course. |
|  | Modern partnerships often include a small number of partners who understand the value of long-term contracts that value quality, speed, and flexibility as much, if not more, than cost. |

PTS: 10

BUSPROG: Communication LO: 1-4 Bloom’s: Application Difficulty: Difficult

2. List the four elements of supply chain management and provide a brief explanation of each of the four elements. What types of failures might each of those elements create within the supply chain? Why might those results be linked to errors in a particular element?

ANS:

*Note: While the descriptions of each of the four elements are relatively general and accurate, the types of failures each of the elements may be responsible for, are rather long lists. Therefore, in many cases it is important for the student to explain why one element may ultimately be responsible for a certain problem with a list.*

|  |  |
| --- | --- |
| a. | Supply Elements  Supply management professionals most often perform the purchasing function. Effective supply management has resulted in smaller supply bases and the development of more long-term supplier relationships to achieve the competitive benefits. Supply management is one of the foundations of supply chain management, since incoming material quality, delivery timing, purchase price, product safety, and purchasing’s impact on the environment are all affected by the buyer-supplier relationship and the capabilities of suppliers. |
|  |  |
|  | Some of the mistakes in purchasing can cause low-quality end-items, high inventories, stockouts, excessive cost of goods sold, interruptions in production, or excessive operational costs. |

|  |  |
| --- | --- |
| b. | Operations Elements  The operations elements of the supply chain take into account the assembly or processing of materials and components into finished products or services. Operations is also responsible for creating the right amount of product within an appropriate period of time that will meet the demand needs of the customer while still satisfying their specific needs in terms of quality, cost, customization, and timely delivery. |
|  |  |
|  | Mistakes in operations can cause shortages, stockouts, high inventories, low inventories, excessive operational costs, late deliveries, low-quality end-items, defects, or dangerous end-items. |

|  |  |
| --- | --- |
| c. | Logistics Elements  the distribution elements of the supply chain are focused on delivering products to customers at the right time, quality, and volume. The distribution elements include transportation, warehousing, break-bulking, packaging, containerization, and any services related to developing and keeping a distribution itinerary. |
|  |  |
|  | Mistakes in distribution can cause shortages, stockouts, excessive operational costs, damaged end-items, high pilferage rates, customer complaints, delivery errors (wrong item to the wrong destination), and lost inventory. |

|  |  |
| --- | --- |
| d. | Integration Elements  The integration elements involve the planning and coordination required to create a seamless supply chain. Supply chain integration requires management to inform all supply chain parties of how important it is for them to share information, articulate their needs, and develop relationships. |
|  |  |
|  | Poor supply chain integration will cause conflicts between supply chain partners, late deliveries, tardy production, overproduction, under production, poor forecasting, over purchasing, material shortages, long lead times, high operational costs, excessive waiting times, and excessive inventories. |

PTS: 10

BUSPROG: Communication LO: 1-2 Bloom’s: Comprehension Difficulty: Difficult

3. Explain the bullwhip effect? What can be done to reduce the bullwhip effect? Give an example of how the bullwhip effect results in excess costs in the supply chain.

ANS:

|  |  |
| --- | --- |
| a. | The bullwhip effect is a build-up of safety stocks due to poor forecasting and communication that cause order quantities to be increased throughout the supply chain. The increases become amplified as the product continues farther down the supply chain. This will likely cause overstock and excess costs for each firm in a supply chain. |
| b. | Better communication between each link in the supply chain and sharing of upcoming demand forecasts makes it easier for companies to feel confident about their order quantity. Trading partners feel more comfortable with manufacturers who consistently produce high quality products. Firms feel more confident and have better working relationships with manufactures that have better products and better services. Better working relationships lead to single source for supplies and this helps the manufacturer plan for demand. |
| c. | Example of the bullwhip effect – Company A sells widgets to customers. Actual demand from customers is 20 widgets. Company A orders 25 widgets from the distributor B; an extra 5 units are to ensure they don’t run out of floor stock. Distributor B wants to order in bulk to save costs so they order 30 widgets from supplier C. Supplier C always keeps safety 20% stock on hand so it orders 36 widgets from Manufacturer D. At Manufacturer D’s factory, they must produce in runs of 50. Now 50 units have been produced for a demand of only 20 units causing each firm in the supply chain excess costs. |

PTS: 10

BUSPROG: Communication LO: 1-5 Bloom’s: Application Difficulty: Difficult