**PART II**

**ANSWERS TO END-OF-CHAPTER QUESTIONS**

**CHAPTER 1: AN OVERVIEW OF LOGISTICS**

1-1. Did it surprise you that logistics has such an important economic impact? Why or why not?

The answer to this question likely depends on a student’s prior exposure to logistics. A “typical” student in an undergraduate basic logistics course likely has had limited exposure to and knowledge about logistics and thus might be unaware as to logistics’ economic impact. As such, she/he might be pleasantly surprised to learn that logistics is important for a country’s economic growth and development.

1-2. Distinguish between possession, form, time, and place utility.

Possession utility refers to the value or usefulness that comes from a customer being able to take possession of a product and can be influenced by the relevant payment terms. Form utility refers to a product’s being in a form that (1) can be used by the customer and (2) is of value to the customer. Time utility refers to having products available when they are needed by customers while place utility refers to having products available where they are needed by customers.

1-3. How does logistics contribute to time and place utility?

Logistics contributes to time utility by recognizing that different products have different sensitivities to time. For example, a three-day late delivery of bananas likely has more serious consequences than a three-day late delivery of a box of pencils. As for place utility, logistics facilitates products being moved from points of lesser value to points of greater value.

1-4. How can a particular logistics system be effective but not efficient?

Effectiveness can be thought of as “how well a company does what it says it’s going to do;” efficiency focuses on how well (or poorly) company resources are used to achieve what a company promises they can do. There are a multitude of examples that would illustrate an effective, but not efficient, logistics system. For example, some companies routinely use premium and/or expedited transportation—which increase transportation costs—to meet customer delivery requirements. As such, the company could be considered effective (meeting delivery deadlines) but perhaps not efficient (increased transportation costs).

1-5. Explain the significance of the fact that the purpose of logistics is to meet customer requirements.

One reason for this significance is that meeting customer requirements means that companies must know—rather than assume—customer needs and wants. This knowledge is facilitated by communication between companies and their customers. Even today some companies are hesitant to communicate with customers. In addition, meeting customer requirements means that a “one size fits all” approach to logistics will result in some customers being overserved and others being underserved. As a result, companies should consider a “tailored logistics” approach, where groups of customers with similar logistical needs and wants are provided with the appropriate logistical services.

1-6. Explain how an understanding of logistics management could be relevant to your favorite charitable organization.

There are any number of examples that can be used. The textbook mentions the Food Bank of New York City; from a logistical perspective, the Food Bank of New York City is responsible for collecting, sorting, repacking, and distributing food from its 90,000 square-foot warehouse.

1-7. How has a reduction in economic regulation contributed to the increased importance of logistics?

Reductions in economic regulation in the United States allowed individual carriers flexibility in pricing and service, and this flexibility was important to logistics for several reasons. First, it provided companies with the ability to implement the tailored logistics approach in the sense that companies could specify different logistics service levels and prices could be adjusted accordingly. Second, the increased pricing flexibility allowed large buyers of transportation services to reduce their transportation costs by leveraging large amounts of freight with a limited number of carriers.

1-8. Discuss the logistical implications associated with the increased emphasis on the convenience associated with a family’s shopping experience.

This convenience is manifested in various ways to include extended store hours, home delivery of purchased items, and ready-to-eat-ready-to-cook foods. From a logistics perspective, extended store hours force retailers to address issues such as the optimal delivery times for replenishment trucks and when to replenish merchandise. A logistical challenge with home delivery is the coordination of delivery times with the purchaser’s ability to receive the item(s). Finally, ready-to-eat-ready-to-cook foods have different packaging requirements, such as reusable bags.

1-9. Explain how big-box retailers are logistical trendsetters.

The logistics practices of big-box retailers are often viewed as barometers for emerging logistics trends. In the 1990s, for example, Wal-Mart and Warner-Lambert were the first two companies to explore collaborative planning, forecasting, and replenishment (CPFR). Big-box retailers have also been trendsetters with respect to environmental and social issues in logistics. As an example, one of Best Buy’s sustainability goals for 2020 is to recycle one billion pounds of consumer goods.

1-10.What is the systems approach to problem solving? How is this concept applicable to logistics management?

The systems approach to problem solving suggests that a company’s objectives can be realized by recognizing the mutual interdependence of the major functional areas such as marketing, production, finance, and logistics. As such, decisions made by one functional area can have important implications for the other functional areas. With respect to logistics, the systems approach suggests that one should recognize the mutual interdependence of the various activities that constitute the logistics function. Thus, a transportation decision may impact inventory, warehousing, and packaging, among others.

1-11. Distinguish between materials management and physical distribution.

Materials management refers to the movement and storage of materials into a firm while physical distribution refers to the storage of finished product and movement to the customer.

1-12. Explain what is meant by the total cost approach to logistics.

The total cost approach to logistics is built on the premise that all relevant activities in moving and storing products should be considered as a whole (i.e., their total cost) and not individually. Use of the total cost approach requires an understanding of cost trade-offs. In other words, changes to one logistics activity cause some costs to increase and others to decrease. The key to the total cost approach is that all relevant cost items are considered simultaneously when making a decision. The objective is to find the approach with the lowest total cost that supports the organization’s customer service requirements.

1-13. Define what is meant by a cost trade-off. Do you believe that this concept is workable? Why or why not?

A cost trade-off acknowledges that changing patterns or activities of distribution will result in some costs increasing and other costs decreasing. The net effect, however, should be an overall cost decrease for providing a given level of customer service.

The remainder of the question asks the student for her/his opinion about the workability of this concept. Although nearly any answer is acceptable, those students who believe that cost trade-offs are unworkable might have difficulty with many of the concepts presented throughout the text.

1-14.What are several areas in which finance and logistics might interface?

The finance department is often in charge of capital budgeting decisions that would affect logistics, such as materials handling and packaging equipment. Another potential area of finance/logistics interface is with respect to inventory; finance tends to view inventory from a dollar perspective while logistics tends to be more concerned with the number of units of inventory. This dichotomy is highlighted by the concept of depreciation which reduces the monetary value of inventory by a certain amount per period of time—even though the actual quantity of inventory may be unchanged.

1-15. Discuss the postponement concept as it relates to the production and logistics interface.

Postponement refers to the delay of value-added activities such as assembly, production, and packaging until the latest possible time. Some value-added activities, such as case packing and case labeling, that were traditionally performed at a production plant are now performed in warehousing facilities. As a result, warehousing facilities are adding new types of equipment and being configured differently to allow specific value-added activities to take place.

1-16. Define what is meant by a landed cost and explain its relevance for pricing decisions.

Landed cost refers to the price of a product at its source plus transportation costs to its destination. On the one hand, a selling price that is based on a product’s landed cost allows the seller to offer “free” delivery of the product to prospective customers, because the transportation costs associated with delivery are captured in the landed cost. On the other hand, a selling price that is based on a product’s landed cost could result in a substantial increase in a product’s selling price, and a higher selling price tends to decrease buyer demand for most products.

1-17. Discuss several possible interfaces between marketing and logistics in terms of product decisions.

One interface involves the marked increase in product offerings; marketers like this increase because it allows for more customer choice, but these additional choices create logistical challenges in terms of identification, storage, and tracking. Another interface concerns the amount of a particular item (SKU) to hold. Marketers prefer to carry higher quantities for particular items because this reduces the likelihood of stockouts; however, from a logistics perspective, higher quantities of inventory 1) necessitate additional storage space and 2) increase inventory carrying costs. Students can also discuss product design and sustainable products.

1-18. Briefly discuss the ownership, negotiations, financing, promotion, and logistics channel.

The ownership channel covers movement of the title to the goods; the goods themselves might not be physically present or even exist. The negotiations channel is the one in which buy and sell agreements are reached and can include telephone, email, and electronic data interchange, among others. The financing channel handles payment for goods and the company’s credit, while the promotions channel is concerned with promoting a new or an existing product. Finally, the logistics channel handles the physical flow of the product.

1-19. Discuss five activities that might be part of a company’s logistics department.

The chapter presents, and briefly describes, 12 separate activities that might be part of a company’s logistics department. Any five of the 12 are acceptable to be discussed by the students.

1-20. Logistics managers must be both generalists and specialists. Why is this true? Does this help to explain why there tends to be an imbalance in the supply of, and demand for, logistics managers?

Logisticians need to be generalists in order to understand the relationship between logistics and other corporate functions, both within and outside the firm. Logisticians also need to be specialists to understand the relationships between various logistics activities, as well as having some technical knowledge of the various activities. This combination of generalist and specialist likely provides a partial explanation for the imbalance in the supply of, and demand for, logisticians in the sense that not everyone is capable of balancing generalist and specialist requirements.

**PART III**

**EXAMINATION QUESTIONS**

**CHAPTER 1: AN OVERVIEW OF LOGISTICS**

**Multiple Choice Questions (correct answers are bolded)**

1. Logistics clearly contributes to \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ utility.

**a. time; place**

b. form; time

c. place; form

d. possession; time

e. none of the above

1. \_\_\_\_\_\_\_\_\_\_\_ utility refers to the value or usefulness that comes from a customer being able to take possession of a product.

a. Time

b. Place

c. Form

d. **Possession**

1. \_\_\_\_\_\_\_\_\_\_\_ utility refers to having products available where they are needed by customers.
   1. Possession
   2. Time
   3. **Place**
   4. Form
2. All of the following are types of economic utility, except:
   1. Time
   2. **Production**
   3. Place
   4. Possession
   5. All of the above are types of economic utility
3. “How well a company does what it says it’s going to do” represents \_\_\_\_\_\_\_\_\_\_\_.
   1. efficiency
   2. productivity
   3. leading edge logistics
   4. **effectiveness**
4. What concept refers to “how well company resources are used to achieve what a company promises it can do?”
   1. **Efficiency**
   2. Productivity
   3. Reengineering
   4. Effectiveness
5. Every customer getting the same type and level of logistics service refers to \_\_\_\_\_\_\_\_\_\_\_.
   1. tailored logistics
   2. **mass logistics**
   3. effectiveness
   4. efficiency
6. Which of the following is not a reason for the increased importance of logistics?
   1. **growing power of manufacturers**
   2. reduction in economic regulation
   3. globalization of trade
   4. technological advances
   5. all of the above are reasons

9. Widespread reductions in economic regulation of US transportation carriers occurred in \_\_\_\_.

a. 1960s and 1970s

b. **1970s and 1980s**

c. 1980s and 1990s

d. only the 1990s

10. The \_\_\_\_ concept suggests that the customer desires a product offering that is highly tailored to the customer’s exact preferences.

a. market demassification

b. relationship marketing

c. **customized customer**

d. niche marketing

11. Approximately \_\_\_\_ percent of US adult women are currently in the workforce.

a. 70

b. **60**

c. 50

d. 40

12. \_\_\_\_ refers to the removal of intermediaries between producer and consumer.

a. direct channels

b. market demassification

c. consolidation

d. **disintermediation**

13. \_\_\_\_ are stores with large amounts of both floor space and product for sale.

a. mass merchandisers

b. power retailers

c. **big-box retailers**

d. do-it-yourself (DIY) retailers

14. World trade grew at an average annual rate of approximately \_\_\_\_ percent between 1991 and 2011.

a. **5.5**

b. 4.5

c. 3.5

d. 2.5

15. The \_\_\_\_ approach indicates that a company’s objectives can be realized by recognizing the mutual interdependence of major functional areas.

a. supply chain

b. **systems**

c. interfunctionality

d. rhochrematics

16. The movement and storage of materials into a firm refers to:

a. physical distribution

b. **materials management**

c. supply chain management

d. materials handling

17. Which concept refers to the storage of finished product and movement to the customer?

a. supply chain management

b. business logistics

c. **physical distribution**

d. materials management

18. Logistics managers use the \_\_\_\_ approach to coordinate materials management and physical distribution in a cost-efficient manner.

a. **total cost**

b. supply chain

c. interfunctional logistics

d. intrafunctional logistics

19. A cost trade-off is a situation where:

a. all costs react according to their individual degrees of inflation in the economy

b. all costs are reflected as a percentage variation from standard costs

c. **some costs increase and some costs decrease**

d. some costs are eliminated by efficient management controls

20. The \_\_\_\_ department often measures inventory in terms of its cost or value in dollars, whereas \_\_\_\_ tends to measure inventory in terms of units.

a. marketing; logistics

b. finance; production

c. marketing; production

d. **finance; logistics**

21. A common interface between production and logistics involves:

a. the types of material handling equipment

b. **the length of production runs**

c. the use of plastic versus wood pallets

d. the mode of transportation

22. \_\_\_\_ refers to the delay of value-added activities such as assembly, production, and packaging to the latest possible time.

a. building blocks

b. lean manufacturing

c. deferral

d. **postponement**

23. The four basic components of the marketing mix include all of the following except:

a. price

b. **production**

c. place

d. promotion

24. Co-branding allows customers to purchase products from two or more name-brand retailers at one store location. Which of the following statements about co-branding is false?

a. they offer potential customers convenience by satisfying needs at one place

b. they boost brand awareness

c. **they create relatively few logistical challenges**

d. they increase customer spending per transaction

e. all of the above are true

25. Landed costs refer to:

a. the costs of a product shipped via surface transport

b. the costs of a product that is quoted cash on delivery (COD)

c. the costs of a prepaid shipment

d. **a price that includes both the cost of the product plus transportation to the buyer**

26. \_\_\_\_ refers to being out of an item at the same time there is demand for it.

a. intensive distribution

b. tailored logistics

c. **stockout**

d. supplier indifference

27. Which of the following is not part of the marketing channel?

a. the logistics channel

b. the negotiations channel

c. the promotion channel

d. the finance channel

e**.** **all are part of the marketing channel**

28. The ownership channel consists of all parties except:

a. **customers**

b. manufacturers

c. wholesalers

d. retailers

29. Which channel covers the movement of title to the goods?

a. promotions

b. logistics

c. finance

d. **ownership**

30. \_\_\_\_ is bringing together similar stocks from different sources.

a. **accumulating**

b. assorting

c. auditing

d. allocating

31. \_\_\_\_ refers to breaking a homogeneous supply into smaller lots.

a. sorting out

b. **allocating**

c. accumulating

d. assorting

32. Channel intermediaries:

a. assume temporary ownership of the goods

b. tend to lack focus

c. **fill niches**

d. tend to disappear as the market becomes organized

33. Brokers are intermediaries that are commonly associated with the \_\_\_\_ channel.

a. promotions

b. finance

c. ownership

d. **negotiation**

34. The most costly logistics activity in many firms is \_\_\_\_

a. industrial packaging

b. **transportation management**

c. order management

d. warehousing management

35. *U.S. News & World Report* suggests that logistics employment should increase by \_\_\_\_ percent through 2018.

a. 10

b. 15

c. **20**

d. 25

**True-False Questions**

1. Absolute and relative logistics costs in relation to Gross Domestic Product vary from country to country. (True)

2. The four general types of economic utility are production, possession, time, and place. (False)

3. Logistics clearly contributes to time and form utility. (False)

4. The current definition of logistics, as promulgated by the Council of Supply Chain Management Professionals, suggests that logistics is part of the supply chain process. (True)

5. Logistics is only concerned with forward flows, that is, those directed towards the point of consumption. (False)

6. The purpose of logistics is to maximize customer service. (False)

7. In mass logistics, groups of customers with similar logistical needs and wants are provided with logistics services appropriate to those wants and needs. (False)

8. Humanitarian logistics represents an emerging application of logistics to not-for-profit organizations. (True)

9. Reductions in economic regulation allowed individual transportation companies flexibility in pricing and service. (True)

10. Market demassification suggests that the customer desires a product offering that is highly tailored to her/his exact preference. (False)

11. Disintermediation refers the removal of intermediaries between producer and consumer. (True)

12. Superior logistics is an essential component of corporate strategies for many big-box retailers. (True)

13. Logistics has played a minor role in the growth of global trade. (False)

14. The **systems approach** indicates that a company’s objectives can be realized by recognizing the mutual interdependence of the major functional areas of a firm. (True)

15. Physical distribution is synonymous with materials management. (False)

16. Interfunctional logistics attempts to coordinate materials manage­ment and physical distribution in a cost efficient manner that supports an organization’s customer service objectives. (False)

17. The key to the total cost approach is that all relevant cost items are considered simultaneously when making a decision. (True)

18. The finance department tends to measure inventory in terms of units while logistics tends to measure inventory in terms of its cost / value. (False)

19. Long production runs sometimes result in excessive inventory of products with limited demand for them. (True)

20. Postponement is the delay of value-added activities such as assembly, production, and packaging to the latest possible time. (True)

21. Logistics offers many companies an important route for creating marketing superiority. (True)

22. Dual distribution refers to an alliance that allows customers to purchase products from two or more name-brand retailers at one store location. (False)

23. Landed costs refer to the price of a product at its source. (False)

24. Stockouts refer to a situation where a company is out of an item at the same time that there is demand for that item. (True)

25. Logistical decisions tend not to be impacted by marketers’ growing emphasis on offering sustainable products. (False)

26. Many promotional decisions, such as pricing campaigns that lower the price of certain items, require close coordination between marketing and logistics. (True)

27. The ownership channel is the one where buy and sell agreements are reached. (False)

28. The financing channel handles a company’s credit and payment for goods. (True)

29. There is no linkage between the promotions and logistics channels. (False)

30. The most significant contribution that the logistics channel makes to the overall channel process is the sorting function. (True)

31. The sorting function has four steps. (True)

32. The sorting function takes place between retailers and the consumer. (False)

33. Intermediaries assume ownership of goods while they’re in the marketing channel. (False)

34. A broker is a type of intermediary often associated with the negotiations channel. (True)

35. A commonly used logistical intermediary is the freight forwarder. (True)

36. Demand forecasting is not considered to be a logistics-related activity. (False)

37. Packaging can have both a marketing and logistical dimension. (True)

38. Transportation represents the most costly logistics activity in many organizations. (True)

39. It is better for a logistics manager to be a generalist rather than a specialist. (False)

40. *U.S. News & World Report* has highlighted logistician as one of the 50 best careers. (True)

**PART IV**

**CASE SOLUTIONS**

**CASE 1-1 KIDDIELAND AND THE SUPER GYM**

**Question 1:** List and discuss the advantages and disadvantages of purchasing a two-wheeled trailer for each store to use for delivering Super Gyms.

Because the stores are in a number of states, one would have to check the motor vehicle and insurance requirements of each state. An advantage is that deliveries would be under the control of each store. A disadvantage may be labor costs, especially if two workers are needed to make the delivery. Also, once at the site, the store’s employees might be asked to assist in the assembly of the gym.

**Question 2:** List and discuss the advantages and disadvantages of having local trucking companies deliver the Super Gym from the retail stores to the customers.

There are probably no disadvantages to using a local trucking company to make the delivery. A decision would have to be made how to handle the trucking firm’s charges.

**Question 3:** List and discuss the advantages and disadvantages of stocking Super Gyms at the distribution centers and then having the truck that makes deliveries from the distribution center to the retail stores also make deliveries of Super Gyms to individual customers.

The problem here focuses on the size of equipment; large tractor-trailer combinations are not suited to making home deliveries. The actual costs to KiddieLand of using trucks this way might be very high. There might be some savings in inventory costs by stocking the gyms at the distribution center rather than at each retail store.

**Question 4:** List and discuss the advantages and disadvantages of charging the customer for home delivery if they are unable to carry the Super Gym home.

Perhaps the one advantage to charging for home delivery is that KiddieLand recoups the associated costs. However, because charged home delivery will add to the customer’s total purchase price, there could be a reduction in demand or this could generate customer dissatisfaction.

**Question 5:** Which alternative would you prefer? Why?

The student can choose any alternative. However, the text of the case seems to prefer the use of a local trucking company and charging the customer for home delivery.

**Question 6:** Draft a brief statement (catalog copy) to be inserted in the firm’s spring/summer brochure that clearly explains to the potential customers the policy that is recommended in Question 5.

The brochure is intended for use in all stores, so whatever copy is prepared must be widely applicable. A sentence might read: “The Super Gym comes unassembled and is packed in three boxes: one weighing \_\_\_\_ pounds, is \_\_\_\_ inches by \_\_\_\_ inches by \_\_\_\_ inches; the second weighs \_\_\_\_ pounds, is \_\_\_\_ inches by \_\_\_\_ inches by \_\_\_\_ inches; and the third weighs \_\_\_\_ pounds, and is \_\_\_\_ inches by \_\_\_\_ inches by \_\_\_\_ inches. Assembly requires the following tools: \_\_\_\_; \_\_\_\_; \_\_\_\_; and \_\_\_\_.”

**Question 7:** In the first meeting, A.J. asked about SUVs but there was no further mention of them. How would you follow up on his query?

Anyone in the group could answer that sport utility vehicles have more carrying capacity than autos and many also have trailer-hitches. SUVs are sufficiently popular—particularly in the United States—that many buyers of the Super Gym equipment would either have a SUV, or be able to borrow one.