

Chapter 2—Role of Logistics in Supply Chains

TRUE/FALSE

1. The utility created through the basic marketing activities is known as place utility.
ANS: F PTS: 1 REF: Page 37
2. Transportation is the physical movement or flow of goods.
ANS: T PTS: 1 REF: Page 40
3. During the 1990s and 2000s, logistics costs as a percentage of gross national product declined.
ANS: T PTS: 1 REF: Page 44
4. Logistics systems having a very heavy inbound flow and a very simple outbound flow are reverse systems.
ANS: F PTS: 1 REF: Page 63
5. Acme Battery distributes its batteries to warehouses, where they are stored until ordered by a retailer. The warehouses are located close by the retail markets served. This is the logistics channel approach to logistics.
ANS: T PTS: 1 REF: Page 66-67
6. In a logistics system, warehousing should be optimized at the expense of related logistics activities, such as transportation and procurement.
ANS: F PTS: 1 REF: Page 69
7. The mathematical calculation of the point of equality between systems under analysis is used for short-run/static analysis.
ANS: F PTS: 1 REF: Page 59
8. To hold down distribution cost, the lowest cost carrier should always be used.
ANS: F PTS: 1 REF: Page 64
9. The inverse relationship that exists between the cost of lost sales and inventory costs is the inventory effect.
ANS: T PTS: 1 REF: Page 54

MULTIPLE CHOICE

10. Ensuring the availability of the right product, in the right quantity, and the right condition, at the right place, at the right time, for the right customer at the right cost, is which definition of logistics?
 - a. Seven Rs
 - b. Council of Logistics Management

- c. Society of Logistic Engineers
- d. supply chain logistics

ANS: A PTS: 1 REF: Page 35 inside Table 2-1

11. Logistics is the process of anticipating customer needs and wants; acquiring the capital, materials, people, technologies, and information necessary to meet those needs and wants; optimizing the goods- or service-producing network to fulfill customer requests; and utilizing the network to fulfill customer requests in a timely manner. This is a
- a. definition from an inventory perspective.
 - b. general definition.
 - c. definition offered by the Society of Logistics Engineers.
 - d. a definition provided by the Council of Logistics Management.

ANS: B PTS: 1 REF: Page 36

12. All four subdivisions of logistics have some common characteristics. Which of the below does not belong in the list:
- a. transportation
 - b. marketing
 - c. scheduling
 - d. forecasting

ANS: B PTS: 1 REF: Page 36

13. The value that is added to a good through a manufacturing, production, or assembly process is:
- a. form utility
 - b. place utility
 - c. time utility
 - d. possession utility

ANS: A PTS: 1 REF: Page 36

14. A product's form utility is created when value is added to the product through a manufacturing, production or assembly process. However, logistics activity can provide form utility also. Which is an example of the creation of form utility by a logistics activity?
- a. when lumber is cut and made into a chair
 - b. when a firm's finance manager approves customer purchases on a credit basis
 - c. when bulk computer disks in different colors are packed in three-color assortments for sale to computer users
 - d. the breaking bulk and repackaging at a distribution center

ANS: D PTS: 1 REF: Page 37

15. The utility that is created by moving goods from surplus points to points where demand exists is referred to as:
- a. form
 - b. place
 - c. time
 - d. possession

ANS: B PTS: 1 REF: Page 40-41

16. Which is created when a product or service is at a point when demanded by customers?
- a. form utility
 - b. place utility

- c. time utility
- d. possession utility

ANS: B

PTS: 1

REF: Page 37

17. Time utility depends on
- a. when the carrier picks up the shipment.
 - b. transportation companies delivering on time.
 - c. proper forecasting.
 - d. having the product available when the user wants it.

ANS: D

PTS: 1

REF: Page 37

18. What is often the largest component of logistics costs?
- a. inventory costs
 - b. transportation costs
 - c. shipper-related costs
 - d. administrative costs

ANS: B

PTS: 1

REF: Page 40

19. Materials handling is concerned with
- a. inventory levels.
 - b. breaking bulk.
 - c. scheduling trade-offs.
 - d. short distance movement.

ANS: D

PTS: 1

REF: Page 43-44

20. Marketers have begun to recognize the strategic value of place in the marketing mix, as well as the benefits resulting from high-quality logistical services. As a result, which has been recognized as the interface activity between marketing and logistics?
- a. product
 - b. promotion
 - c. price
 - d. customer service

ANS: D

PTS: 1

REF: Page 48

21. Celebrated Products is introducing a new line of celebrity signature sunglasses. The sales manager wants a media blitz to make customers aware of the line and create early sales typical of a "pull" pattern. Which will be a likely result of the marketing manager's plan?
- a. a stable demand pattern
 - b. emergency shipments
 - c. an erratic demand pattern
 - d. strain on the logistics system

ANS: C

PTS: 1

REF: Page 51

22. What activity is described as the movement of goods into a warehouse, the placement of goods in a warehouse, and the movement of goods from storage to order picking areas and eventually to dock areas for transportation out of the warehouse?
- a. materials handling
 - b. physical distribution
 - c. business logistics
 - d. order fulfillment

ANS: A PTS: 1 REF: Page 49-50

23. A(n) ____ relationship exists between the cost of lost sales and inventory cost.
- a. reverse
 - b. proportional
 - c. inverse
 - d. non linear

ANS: C PTS: 1 REF: Page 54

24. Water Cruisers is located in Jacksonville, Florida, and makes small yachts and luxury pontoon boats for customers on the East coast of the United States. Each boat requires thousands of parts purchased from over 1,000 vendors. A number of boats are in production at any one time, so a large number of parts constantly arrive and are stored. Once a boat is finished, it is sailed up the coast to a convenient port for customer delivery. Which type of logistics system does Water Cruisers use?
- a. balanced system
 - b. heavy inbound
 - c. heavy outbound
 - d. reverse system

ANS: B PTS: 1 REF: Page 53

25. A number of product-related factors affect the cost and importance of logistics. Which is not one of these factors?
- a. value
 - b. density
 - c. stock keeping units
 - d. risk of damage

ANS: C PTS: 1 REF: Page 55

26. When a specific point in time, or level of production, is chosen and costs are developed for the various logistics cost centers, it is called
- a. least cost analysis.
 - b. short run analysis.
 - c. cost center analysis.
 - d. link node analysis.

ANS: B PTS: 1 REF: Page 55

27. A ____ analysis examines a logistics system over a long time period or range of output.
- a. cost center analysis
 - b. dynamic
 - c. link node analysis
 - d. least cost analysis

ANS: B PTS: 1 REF: Page 61

28. A balanced system is
- a. one where all four management systems are equal
 - b. logistics expenses are equal to cost of goods sold
 - c. another name for supply chain management
 - d. inbound and outbound flows are nearly equal

ANS: D PTS: 1 REF: Page 63

29. What are established spatial points where goods stop for storage or processing?
- nodes
 - links
 - cost centers
 - fulfillment centers

ANS: A

PTS: 1

REF: Page 55

ESSAY

30. What is the primary challenge of logistics?

ANS:

The challenge is to manage the entire logistics system in such a way that order fulfillment meets and perhaps exceeds customer expectations. At the same time, the competitive marketplace demands efficiency--controlling transportation, inventory, and other logistics-related costs. Cost and service tradeoffs have to be considered when evaluating customer service levels and the associated total cost of logistics; but both goals--efficiency and effectiveness--are important to an organization in today's competitive environment.

PTS: 1

REF: Page 33

31. What is the definition of logistics which the authors choose and what group had formulated it?

ANS:

The definition offered by the Council of Supply Chain Management Professionals is: "The art and science of management, engineering, and technical activities concerned with requirements, design, and supplying and maintaining resources to support objectives, plans, and operations."

PTS: 1

REF: Page 35

32. The text mentions four subdivisions of logistics. Pick one, define and discuss.

ANS:

- Business logistics: That part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, service, and related information from point of use or consumption in order to meet customer requirements.
- Military logistics: The design and integration of all aspects of support for the operational capability of the military forces (deployed or in garrison) and their equipment to ensure readiness, reliability, and efficiency.
- Event logistics: The network of activities, facilities, and personnel required to organize, schedule, and deploy the resources for an event to take place and to efficiently withdraw after the event.
- Service logistics: The acquisition, scheduling, and management of the facilities/assets, personnel, and materials to support and sustain a service operation or business.

PTS: 1

REF: Page 36

33. There are five principal types of economic utility that add value to a product or service. Name four of the five and pick one to discuss in more detail.

ANS:

The five principal types of economic utility that add value to a product or service. Included are form, time, place, quantity, and possession. Generally, production activities are credited with providing form utility; logistics activities with time, place, and quantity utilities; and marketing activities with possession utility.

PTS: 1

REF: Page 36

34. The logistics definitions discussed indicate 14 activities for which the logistics manager might be responsible. Name at least eight and briefly discuss any two in detail.

ANS:

- Transportation
- Warehousing and storage
- Industrial packaging
- Materials handling
- Inventory control
- Order fulfillment
- Demand forecasting
- Production planning/scheduling
- Procurement
- Customer service
- Facility location
- Return goods handling
- Parts and service support
- Salvage and scrap disposal

PTS: 1

REF: Page 39

35. Another dimension of logistics is the micro perspective which examines the relationships between logistics and other functional areas in an organization. What are these other functions? Select one and discuss how it interacts with logistics.

ANS:

Another dimension of logistics is the micro-perspective, which examines the relationships between logistics and other functional areas in an organization--marketing, manufacturing/operations, finance and accounting, and others. Logistics, by its nature, focuses on processes that cut across traditional functional boundaries, particularly in today's environment with its emphasis on the supply chain. Consequently, logistics interfaces in many important ways with other functional areas.

PTS: 1

REF: Page 47

36. What are the 4 "PHs"? Select one, and discuss how it affects logistics.

ANS:

Logistics is sometimes referred to as the other half of marketing. The rationale for this definition is that the physical distribution or outbound side of an organization's logistics system is responsible for the physical movement and storage of products for customers and thus plays an important role in selling a product. In some instances, physical distribution and order fulfillment might be the key variables in selling a product; that is, the ability to provide the product at the right time to the right place in the right quantities might be the critical element in making a sale.

This section briefly discusses the interfaces between logistics and marketing activities in each principal area of the marketing mix. The material is organized according to the four Ps of marketing--price, product, promotion, and place. In addition, recent trends in the interface between logistics and marketing will be discussed.

PTS: 1 REF: Page 48-50

37. What is ROA? Discuss how it can impact logistics.

ANS:

While manufacturing and marketing are probably the two most important internal, functional interfaces for logistics in a product-oriented organization, there are other important interfaces. The finance area has become increasingly important during the last decade. The impact that logistics can have upon return on assets (ROA) or return on investment (ROI) is very significant. ROA is defined as follows:

$$\text{ROA} = \text{Revenue} - \text{Expenses} / \text{Assets}$$

Or

$$\text{ROA} = \text{Gross Profit} / \text{Assets}$$

Logistics can positively impact ROA in several ways. First, inventory is both an asset on the balance sheet and an expense on the income statement. Reducing inventory levels reduces the asset base as well as the corresponding variable expenses, thus having a positive impact on ROA. Second, transportation and warehousing costs can also influence ROA. If an organization owns its warehouses and transportation fleet, assets will be increased. If these assets are reduced or eliminated, ROA will increase. Similarly, if an organization utilizes third parties for warehousing and transportation, variable expenses will be incurred. Reducing these expenses will also have a positive impact on ROA. Finally, the focus on customer service can increase revenue. As long as the incremental increase in revenue is larger than the incremental increase in the cost of customer service, ROA will increase.

PTS: 1 REF: Page 52

38. There are a number of product-related factors that can affect the cost and importance of logistics. Identify the factors, and pick one to discuss further.

ANS:

A number of product-related factors affect the cost and importance of logistics. Among the more significant of these are dollar value, density, susceptibility to damage, and the need for special handling.

PTS: 1 REF: Page 55-58

39. Spatial relationship is extremely significant to logistics. Discuss why this is true.

ANS:

A final topic that is extremely significant to logistics is spatial relationships, the location of fixed points in the logistics system with respect to demand and supply points. Spatial relationships are very important to transportation costs, since these costs tend to increase with distance.

PTS: 1 REF: Page 58-59