

## Chapter 1

### Operations and Supply Chain Strategy for Competitiveness

#### *Multiple Choice*

1. A purposeful collection of people, objects, and procedures for operating within an environment is known as a(n):

- a) Operation
- b) Sub-system
- c) System
- d) Sub-operation

Answer: C

Difficulty: Easy

Reference: Operations

2. Which of the following is among the six major elements of a production system?

Check all that apply.

- a) Inputs
- b) Output
- c) Monitoring and legislative compliance
- d) Inventory

Answer: A and B

Difficulty: Easy

Reference: Operations

3. Value can be added to an entity in all the following ways, EXCEPT:

- a) Altering
- b) Facilitating
- c) Storing
- d) Transporting

Answer: B

Difficulty: Easy

Reference: Operations

4. A type of output that commonly results from a production system is:

- a) A product
- b) A service
- c) Neither A nor B
- d) Both A and B

Answer: D

Difficulty: Easy

Reference: Operations

5. Which of the following is NOT considered a characteristic of a service?

- a) Intangible
- b) Labor-intensive production
- c) Quality difficult to measure
- d) Delayed consumption

Answer: D

Difficulty: Easy

Reference: Operations

6. A distinction between normal goods and information/knowledge is that

- a) Normal goods wear out, but information/knowledge does not
- b) Information/knowledge can be given or sold to many others
- c) Information/knowledge is subject to diminishing returns, but physical outputs are subject to increasing returns
- d) Both A and B

Answer: D

Difficulty: Medium

Reference: Operations

7. Inputs in a bank's production system may include:

- a) Loan default rates and the environment
- b) Interest rates and wage rates
- c) Checks and deposits
- d) Federal Reserve decisions and the economy

Answer: C

Difficulty: Easy

Reference: Operations

8. Which of the following uses techniques from Toyota Production System and JIT to eliminate waste and non-value-added activities?

- a) Enterprise and material requirements planning
- b) Lean Management
- c) Quality Control
- d) Capacity Management

Answer: B

Difficulty: Medium

Reference: Customer Value

9. Learning how to plan and control project activities to meet specifications for performance, schedule, and cost are among the subjects of:

- a) Project management
- b) Lean management
- c) Supply chain management
- d) Inventory management
- e)

Answer: A

Difficulty: Medium

Reference: Customer Value

10. Customization occurs when

- a) Products or services are world-class, suitable for most markets
- b) Products or services are offered on a made-to-order basis
- c) Products or services are developed with several options
- d) None of the above

Answer: B

Difficulty: Medium

Reference: Customer Value

11. What are the two trends in the range of accommodation to customers' needs?

- a) Extraction and delivery
- b) Standardization and flexibility
- c) Customization and standardization
- d) Experience and flexibility

Answer: C

Difficulty: Easy

Reference: Customer Value

12. Which of the following is NOT a mass customization strategy?

- a) Adaptive customizers
- b) Transparent customizers
- c) Cosmetic customizers
- d) Flexible customizers

Answer: D

Difficulty: Medium

Reference: Customer Value

13. Which of the following is NOT an advantage of rapid response?

- a) First-mover advantage
- b) Elimination of overhead
- c) Improved morale and communication

- d) Sharper focus on the customer
- e)

Answer: A

Difficulty: Medium

Reference: Customer Value

14. Which business strategy waits for the product to become fairly standardized and is demanded in large volumes?

- a) First-to-market
- b) Cost minimization or late-to-market
- c) Second-to-market
- d) Market Segmentation

Answer: B

Difficulty: Medium

Reference: Strategy and Competitiveness

15. Bartmess and Cerny (1996) identify three elements of a core capability that hinders imitation; which of the following is NOT one of these elements?

- a) It is complex and requires organizational learning over a period of time
- b) It is based on multiple functional areas, both internal and external to the organization
- c) It is a result of how the functions interact
- d) It is based on the skills/knowledge within the functions themselves

Answer: D

Difficulty: Medium

Reference: Strategy and Competitiveness

### *True/False*

16. A system is defined as a purposeful collection of people, objects, and procedures for operating within an environment.

Answer: True

Difficulty: Easy

Reference: Operations

17. Sub-optimization occurs when one part of the system is improved to the detriment of other parts of the system.

Answer: True

Difficulty: Easy

Reference: Operations

18. Generally speaking, products are characterized by immediate consumption.

Answer: False; their consumption tends to be delayed

Difficulty: Easy

Reference: Operations

19. A renovation activity is any physical entity accompanying a transformation that adds value.

Answer: False

Difficulty: Hard

Response: A facilitating good is any physical entity accompanying a transformation that adds value. See page 10.

Reference: Operations

20. Operations only include those activities associated specifically with the production system.

Answer: False

Difficulty: Medium

Reference: Operations

21. The mortality curve is also referred to as the fallout rate.

Answer: True

Difficulty: Easy

Response: See page 17

Reference: Global Competition

22. As an alternative to research, industries where bringing a product to market is extremely expensive (for example, high technology or pharmaceuticals) tend to adapt the imitation strategy.

Answer: False

Difficulty: Medium

Reference: Global Competition

23. Quality typically implies reliability.

Answer: True

Difficulty: Medium

Response: See page 19

Reference: Customer Value

24. The resource-based view considers the set of resources available to the organization as a secondary driver of the business strategy.

Answer: False  
Difficulty: Easy  
Reference: Strategy and Competitiveness

25. Vision statements express the organization's purpose or reason for existence.

Answer: False  
Difficulty: Medium  
Reference: Strategy and Competitiveness

### *Fill in the Blank*

26. A type of output that is substantially different from products and other types of services is that of knowledge or \_\_\_\_\_; the more they are used, the more valuable they become.

Answer: information  
Difficulty: Medium  
Reference: Operations

27. \_\_\_\_\_ for a nation is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining and expanding the real incomes of its citizens.

Answer: Competitiveness  
Difficulty: Easy  
Reference: Strategy and Competitiveness

### *Short Answer*

28. Pick any industry with which you are familiar. Name the industry and list its major operations inputs.

Answer: Answers will vary depending on the student. An example would be a coffee shop. The inputs would include coffee beans, water, labor, equipment, and facilities.  
Difficulty: Easy  
Reference: Operations

29. What is the suboptimization problem?

Answer: Suboptimization occurs when one part of the system is improved to the detriment of other parts of the system and, perhaps, the organization as a whole.  
Difficulty: Easy

Reference: Systems Perspective

30. Define the major transformation processes.

Answer: There are four: alter, transport, store, and inspect. Alter: Something can be changed structurally. Transport: move an object from one location to another: Store: keep an item in a protected environment. Inspect: appraise an item.

Difficulty: Medium

Reference: Transformation Processes

31. What are the major characteristics of most products that are not shared by most services?

Answer: They are tangible. There is minimal contact with the customer. There is minimal participation by the customer in the delivery. There is delayed consumption. Production is equipment-intensive. And, quality is easily measured.

Difficulty: Medium

Reference: Outputs

32. Provide an example of a service that is all or mostly a service with little or no facilitating good. Defend your answer.

Answer: Examples will vary. One answer might be a medical or dental exam since no facilitating good is provided.

Difficulty: Easy

Reference: Outputs

33. What type of activities make up supply chain management?

Answer: Purchasing or procurement, shipping, and distribution.

Difficulty: Easy

Reference: Operations Activities

34. What generally causes disruptions to the supply chain?

Answer: Disruptions to the supply chain are generally either the result of nature (natural disasters such as earthquakes, blizzards, floods, hurricanes) or human behavior (terrorist strikes, glitches in technology, workers going on strike).

Difficulty: Medium

Reference: Trends in Operations and Supply Chain Management

35. Labor productivity could easily be increased by substituting machinery for labor, but that doesn't mean that this is a wise, or even cost-saving, decision.

Answer: It depends on the amount of labor saved, its cost, and the cost of the machinery being substituted.

Difficulty: Medium

Reference: Costs

36. What is the difference between pure and applied research?

Answer: Pure research is simply working with basic technology to develop new knowledge. Applied research is attempting to develop new knowledge along particular lines.

Difficulty: Easy

Reference: Innovativeness

37. What is conformance to specifications as it relates to quality?

Answer: Conformance to specifications is the extent to which the actual product matches the design specifications.

Difficulty: Easy

Reference: Quality

38. What are the advantages of flexibility?

Answer: Faster matches to customer needs, closer matches to customer needs, faster design-to-market, lower cost of changing production, lower inventories, and ability to meet market demand.

Difficulty: Medium

Reference: Flexibility

39. What is the relationship between responsiveness and cost?

Answer: Faster response to a customer also can, up to a point, reduce the unit costs of the product or service, sometimes significantly.

Difficulty: Medium

Reference: Responsiveness

40. What is an organization's business strategy?

Answer: A set of objectives, plans, and policies for the organization to compete successfully in its markets.

Difficulty: Easy

Reference: Strategy

41. What are the four product development strategies?

Answer: First-to-market, second-to-market, cost minimization or late-to-market, and market segmentation.

Difficulty: Easy

Reference: The Life Cycle



42. Pick any product you are familiar with and list its order qualifiers and order winners. Defend your answer.

Answer: Answers will vary depending on which product is selected. An order qualifier is a characteristic of the product or service that is required if the product is even to be considered or in the running. An order winner is a characteristic that will win the bid or the purchase.

Difficulty: Medium

Reference: Focus

43. What are core competencies?

Answer: Core competencies are the collective knowledge and skills an organization has that distinguish it from the competition.

Difficulty: Easy

Reference: Core Capabilities

44. What is the key element of a business strategy?

Answer: Determining the window of opportunity for executing this strategy before the competitors do the same.

Difficulty: Easy

Reference: Strategy, Competitive Advantage

45. Give an example of a company or product that uses adaptive customizers.

Answer: Fast food hamburgers, or products similar to things like a closet organizer that can be fit to each customer's specifications.

Difficulty: Easy

Reference: Mass Customization

### *Essay Questions*

46. We tend to see production processes as either services or products. However, this classification may be more confusing than helpful. Why is that the case?

Answer: According to the textbook, any physical entity accompanying a transformation that adds value is a facilitating good. Seen another way, many services have a facilitating good and therefore have some characteristics of a service.

Difficulty: Medium

Reference: Outputs

47. Describe the differences between passive and active RFID tags.

Answer: Active RFID tags contain a power source such as a battery and use this power source to periodically transmit a signal that provides identification information.

Difficulty: Easy

Reference: Trends in Operations and Supply Chain Management

48. The textbook lists ten different dimensions of quality that customers often associate with products and services. Pick any product or service and describe how each dimension applies or does not apply to your selection.

Answer: Answers will vary greatly. The ten dimensions are conformance to specifications, performance, features, quick response, reliability, durability, serviceability, aesthetics, and humanity. Please note that not all dimensions apply to all products and services.

Difficulty: Hard

Reference: Quality

49. What is the relationship between mass customization and the product life cycle?

Answer: Mass customization is often quite applicable to products characterized by short life cycles, rapidly advancing technology, or changing customer requirements.

Difficulty: Hard

Reference: Mass Customization

50. List, and briefly describe, four mass customization strategies.

Answer: Collaborative customizers where the customers help articulate their needs. Adaptive customizers where customers can modify it themselves. Cosmetic customizers where minor changes are made like changing the packaging. And, transparent customizers where they provide custom products without the customer knowing that a product has been customized for them.

Difficulty: Easy

Reference: Mass Customization

51. What does it mean for you for our currency to get weaker?

Answer: A weaker currency means you will have to pay more for products imported from foreign countries. US goods will cost less overseas, thus increasing demand for them. This could lead to higher employment and higher wages.

Difficulty: Medium

Reference: Global Trends

52. Why is a decline in a country's currency value described as a double-edged sword?

Answer: Citizens in that country will pay more for imported products but the price of products being exported will decline making them more desirable.

Difficulty: Easy

Reference: Global Trends

53. How can a firm control the market when in the maturity stage of the product life cycle?

Answer: The high volume of output is a commodity, and the firm that can produce an acceptable version at the lowest cost controls that market.

Difficulty: Moderate

Reference: Life Cycle

54. What is required for second-to-market strategy? And why might some firms choose this as opposed to a first-to-market strategy?

Answer: Requires less emphasis on applied research and more emphasis on fast development. Firms attempt to learn from the mistakes of the first-to-market firm and offer a improved or enhanced version of the original product.

Difficulty: Moderate

Reference: Strategy and Competitiveness

Essay

55. Specify the outputs that are associated with outcomes in production and how their classifications can be misconstrued in certain scenarios.

Answer: The outputs that are in line with outcomes in production are products and services. Sometimes, classifying an organization as either a product or service can be a bit confusing, because in some cases a good can be produced by two different organizations, but one will take it a step further and provide a service (such as a computer shop that sells computers and will provide services in-store for those same products).

Difficulty: Moderate

Reference: Outputs

56. What is the main purpose of any organization and why are operations the most important part of any organization from the consumer's perspective?

Answer: The main purpose of any organization is to make some sort of benefit for their customers. Operations are important from the customer's perspective because it handles inputs (labor, equipment, etc.) and turns them into outputs meant to benefit the customer. So, operations are where the organization's ultimate value originates.

Difficulty: Easy

Reference: Operations

57. 3. What kind of role does the "environment" play in a system? Is it possible for the outside environment to place limits on a system?

Answer: The environment is not in direct control of supervisors/managers involved in an organization. It is not directly a part of the production system, but it still holds some influence in a system. Natural resources such as water, plants, and animals are used within the system but all, obviously, originate from the outside environment. Scarcity in these resources due to factors in the outside environment can hinder a system's capabilities of production. New laws that take place in the outside environment can limit a system's ability to produce.

Difficulty: Moderate

Reference: Systems Perspective

58. Can knowledge be considered an input in an organization? If so, in what way?

Answer: Knowledge can be considered an input in an organization. In fact, an organization can't successfully utilize its inputs without the proper knowledge of how to do so. An output can't provide great value to a customer if an organization's employees don't know how to effectively combine inputs to make a solution, or output.

Difficulty: Moderate

Reference: Systems Perspective

59. In what ways can value be added to an input?

Answer: An input can either be altered (ex: changed in physical appearance), transported (ex: moved from place to place), stored (ex: secured from the outside environment), or inspected (ex: gaining a better understanding of how an entity works/will be used). A good example of this is Apple iPhones which are put together overseas and transported across the world (transported). Apple also has a team that looks for ways to improve on last year's product and change the actual look of the phone to make it more user-friendly. This applies to the alter and inspect phases of the transformation process.

Difficulty: Moderate

Reference: Value Added