

# Chapter 1

## Understanding the Supply Chain

### True/False

1. A supply chain includes only the organizations directly involved in supplying components needed for manufacturing.  
Answer: False  
Difficulty: Moderate
2. A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request.  
Answer: True  
Difficulty: Moderate
3. A supply chain could be more accurately described as a supply network or supply web.  
Answer: True  
Difficulty: Moderate
4. The objective of every supply chain is to maximize the overall value generated.  
Answer: True  
Difficulty: Easy
5. The objective of every supply chain is to maximize the value generated for the manufacturing component of the supply chain.  
Answer: False  
Difficulty: Moderate
6. Every supply chain must include all 5 stages.  
Answer: False  
Difficulty: Easy
7. The cycle view of a supply chain holds that the processes in a supply chain are divided into a series of activities performed at the interface between successive stages.  
Answer: True  
Difficulty: Moderate
8. The cycle view of a supply chain holds that the processes in a supply chain are divided into 2 categories depending on whether they are initiated in response to or in anticipation of customer orders.  
Answer: False  
Difficulty: Moderate

9. The push/pull view of a supply chain holds that the processes in a supply chain are divided into 2 categories depending on whether they are initiated in response to or in anticipation of customer orders.  
Answer: True  
Difficulty: Easy
10. The push/pull view of a supply chain holds that the processes in a supply chain are divided into a series of activities performed at the interface between successive stages.  
Answer: False  
Difficulty: Easy
11. The objective of the customer arrival process is to maximize the conversion of customer arrivals to customer orders.  
Answer: True  
Difficulty: Moderate
12. The objective of the customer arrival process is to ensure that orders are quickly and accurately entered and communicated to other affected supply chain processes.  
Answer: False  
Difficulty: Moderate
13. The objective of customer order entry is to ensure that orders are quickly and accurately entered and communicated to other affected supply chain processes.  
Answer: True  
Difficulty: Moderate
14. The objective of customer order entry is to maintain a record of product receipt and complete payment.  
Answer: False  
Difficulty: Hard
15. The replenishment cycle occurs at the retailer/distributor interface.  
Answer: True  
Difficulty: Hard
16. The replenishment cycle occurs at the distributor/manufacturer interface.  
Answer: False  
Difficulty: Hard
17. The replenishment cycle is initiated when a supermarket runs out of stock of a particular item.  
Answer: True  
Difficulty: Hard
18. The replenishment cycle is initiated when customers load items intended for purchase into their carts.  
Answer: False  
Difficulty: Hard

19. The manufacturing cycle occurs at the distributor/manufacturer interface.  
Answer: True  
Difficulty: Moderate
20. The manufacturing cycle occurs at the manufacturer/supplier interface.  
Answer: False  
Difficulty: Moderate
21. The production scheduling process in the manufacturing cycle is similar to the order entry process in the replenishment cycle.  
Answer: True  
Difficulty: Hard
22. The production scheduling process in the manufacturing cycle is similar to the order fulfillment process in the replenishment cycle.  
Answer: False  
Difficulty: Hard
23. The procurement cycle occurs at the manufacturer/supplier interface.  
Answer: True  
Difficulty: Easy
24. The procurement cycle occurs at the retailer/distributor interface.  
Answer: False  
Difficulty: Easy
25. The cycle view of the supply chain is useful when considering operational decisions, because it specifies the roles and responsibilities of each member of the supply chain.  
Answer: True  
Difficulty: Moderate
26. The cycle view of the supply chain is useful when considering operational decisions, because it categorizes processes based on whether they are initiated in response to or in anticipation of customer orders.  
Answer: False  
Difficulty: Moderate
27. The push/pull view of the supply chain is useful when considering strategic decisions relating to supply chain design, because it categorizes processes based on whether they are initiated in response to or in anticipation of customer orders.  
Answer: True  
Difficulty: Moderate
28. The push/pull view of the supply chain is useful when considering strategic decisions relating to supply chain design, because it specifies the roles and responsibilities of each member of the supply chain.  
Answer: False  
Difficulty: Moderate

29. Pull processes may also be referred to as reactive processes.  
Answer: True  
Difficulty: Easy
30. Pull processes may also be referred to as speculative processes.  
Answer: False  
Difficulty: Easy
31. Push processes may also be referred to as speculative processes.  
Answer: True  
Difficulty: Easy
32. Push processes may also be referred to as reactive processes.  
Answer: False  
Difficulty: Easy
33. All supply chain activities within a firm belong to one of three macro processes – CRM, ISCM and SRM.  
Answer: True  
Difficulty: Easy
34. There is a close connection between the design and management of supply chain flows and the success of a supply chain.  
Answer: True  
Difficulty: Easy

### **Multiple Choice**

1. Which of the following is **not** a stage within a typical supply chain?  
a. Customers  
b. Retailers  
c. Wholesalers/Distributors  
d. Manufacturers  
e. All of the above are stages within a typical supply chain.  
Answer: e  
Difficulty: Easy
2. Which of the following is **not** a stage within a typical supply chain?  
a. Customers  
b. Retailers  
c. Wholesalers/Distributors  
d. Merchandisers  
e. Component/Raw material suppliers  
Answer: d  
Difficulty: Easy

3. Supply chain profitability is
- not correlated to the value generated by the various stages of the supply chain.
  - the total profit to be shared across all supply chain stages.
  - the difference between the revenue generated from the customer and the overall cost across the supply chain.
  - the total revenue generated by the distributor stage of the supply chain.
  - b and c only

Answer: e

Difficulty: Difficult

4. Successful supply chain management requires which of the following decision phases?
- supply chain strategy/design
  - supply chain planning
  - supply chain operation
  - all of the above
  - a and b only

Answer: d

Difficulty: Moderate

5. The decision phases in a supply chain include
- production scheduling.
  - customer relationship management.
  - supply chain operation.
  - supply chain orientation.
  - all of the above

Answer: c

Difficulty: Moderate

6. The cycle view of a supply chain holds that
- the processes in a supply chain are divided into 2 categories.
  - the processes in a supply chain are divided into a series of activities performed at the interface between successive stages.
  - all processes in a supply chain are initiated in response to a customer order.
  - all processes in a supply chain are performed in anticipation of customer orders.
  - None of the above are true.

Answer: b

Difficulty: Moderate

7. The push/pull view of a supply chain holds that
- the processes in a supply chain are divided into a series of activities performed at the interface between successive stages.
  - all processes in a supply chain are initiated in response to a customer order.
  - all responses in a supply chain are performed in anticipation of customer orders.

- d. the processes in a supply chain are divided into 2 categories depending on whether they are initiated in response to or in anticipation of customer orders.
- e. None of the above are true.

Answer: d

Difficulty: Moderate

8. Which of the following is **not** a cycle in the supply chain cycle view?
- a. Analysis cycle
  - b. Customer order cycle
  - c. Replenishment cycle
  - d. Manufacturing cycle
  - e. Procurement cycle

Answer: a

Difficulty: Moderate

9. Which of the following is **not** a cycle in the supply chain cycle view?
- a. Customer order cycle
  - b. Replenishment cycle
  - c. Manufacturing cycle
  - d. Procurement cycle
  - e. All of the above are part of the supply chain cycle view.

Answer: e

Difficulty: Moderate

10. The customer order cycle occurs at the
- a. customer/retailer interface.
  - b. retailer/distributor interface.
  - c. distributor/manufacturer interface.
  - d. manufacturer/supplier interface.
  - e. none of the above

Answer: a

Difficulty: Easy

11. Which of the following is **not** a process in the customer order cycle?
- a. Customer arrival
  - b. Customer order entry
  - c. Customer order fulfillment
  - d. Customer order receiving
  - e. All are processes in the customer order cycle

Answer: e

Difficulty: Moderate

12. Customer arrival refers to
- a. the point in time when the customer has access to choices and makes a decision regarding a purchase.
  - b. the customer informing the retailer of what they want to purchase and the retailer allocating product to the customer.
  - c. the process where product is prepared and sent to the customer.
  - d. the process where the customer receives the product and takes ownership.

e. none of the above

Answer: a

Difficulty: Moderate

13. The objective of the customer arrival process is to
- a. get the correct orders to customers by the promised due date at the lowest possible cost.
  - b. maintain a record of product receipt and complete payment.
  - c. maximize the conversion of customer arrivals to customer orders.
  - d. ensure that orders are quickly and accurately entered and communicated to other affected supply chain processes.
  - e. none of the above

Answer: c

Difficulty: Easy

14. Customer order entry is
- a. the point in time when the customer has access to choices and makes a decision regarding a purchase.
  - b. the customer informing the retailer of what they want to purchase and the retailer allocating product to the customer.
  - c. the process where product is prepared and sent to the customer.
  - d. the process where the customer receives the product and takes ownership.
  - e. none of the above

Answer: b

Difficulty: Moderate

15. The objective of customer order entry is to
- a. get the correct orders to customers by the promised due date at the lowest possible cost.
  - b. maintain a record of product receipt and complete payment.
  - c. maximize the conversion of customer arrivals to customer orders.
  - d. ensure that orders are quickly and accurately entered and communicated to other affected supply chain processes.
  - e. none of the above

Answer: d

Difficulty: Easy

16. Customer order fulfillment refers to
- a. the point in time when the customer has access to choices and makes a decision regarding a purchase.
  - b. the customer informing the retailer of what they want to purchase and the retailer allocating product to the customer.
  - c. the process where product is prepared and sent to the customer.
  - d. the process where the customer receives the product and takes ownership.
  - e. none of the above

Answer: c

Difficulty: Moderate

17. The objective of customer order fulfillment is to
- get the correct orders to customers by the promised due date at the lowest possible cost.
  - maintain a record of product receipt and complete payment.
  - maximize the conversion of customer arrivals to customer orders.
  - ensure that orders are quickly and accurately entered and communicated to other affected supply chain processes.
  - none of the above

Answer: a

Difficulty: Easy

18. Customer order receiving is
- the point in time when the customer has access to choices and makes a decision regarding a purchase.
  - the customer informing the retailer of what they want to purchase and the retailer allocates product to the customer.
  - the process where product is prepared and sent to the customer.
  - the process where the customer receives the product and takes ownership.
  - none of the above

Answer: d

Difficulty: Moderate

19. The replenishment cycle occurs at the
- customer/retailer interface.
  - retailer/distributor interface.
  - distributor/manufacturer interface.
  - manufacturer/supplier interface.
  - none of the above

Answer: b

Difficulty: Easy

20. The processes involved in the replenishment cycle include
- retail order receiving.
  - retail order entry.
  - retail order trigger.
  - retail order fulfillment.
  - all of the above

Answer: e

Difficulty: Moderate

21. The processes included in the replenishment cycle include all of the following **except**
- retail order receiving.
  - retail order entry.
  - retail order trigger.
  - retail order fulfillment.
  - none of the above

Answer: e

Difficulty: Moderate



22. The processes included in the replenishment cycle include
- order arrival.
  - production scheduling.
  - retail trigger.
  - manufacturing.
  - receiving.
- Answer: c  
Difficulty: Moderate
23. The replenishment cycle is initiated when
- the customer walks into the supermarket.
  - the customer calls a mail order telemarketing center.
  - customers load items intended for purchase into their carts.
  - a product is received into stock at a store.
  - None of the above.
- Answer: e  
Difficulty: Hard
24. The manufacturing cycle occurs at the
- customer/retailer interface.
  - retailer/distributor interface.
  - distributor/manufacturer interface.
  - manufacturer/supplier interface.
  - none of the above
- Answer: c  
Difficulty: Easy
25. The processes involved in the manufacturing cycle include
- receiving.
  - manufacturing and shipping.
  - production scheduling.
  - order arrival.
  - all of the above
- Answer: e  
Difficulty: Moderate
26. The processes involved in the manufacturing cycle include
- order trigger.
  - production scheduling.
  - order fulfillment.
  - order entry.
  - manufacturing order analysis.
- Answer: b  
Difficulty: Moderate
27. The production scheduling process in the manufacturing cycle is similar to the
- order receiving process in the replenishment cycle.
  - order fulfillment process in the replenishment cycle.
  - order entry process in the replenishment cycle.
  - order trigger process in the replenishment cycle.
  - none of the above

Answer: c

Difficulty: Hard

28. The manufacturing and shipping process in the manufacturing cycle is equivalent to the
- order receiving process in the replenishment cycle.
  - order fulfillment process in the replenishment cycle.
  - order entry process in the replenishment cycle.
  - order trigger process in the replenishment cycle.
  - none of the above

Answer: b

Difficulty: Hard

29. The procurement cycle occurs at the
- customer/retailer interface.
  - retailer/distributor interface.
  - distributor/manufacturer interface.
  - manufacturer/supplier interface.
  - none of the above

Answer: d

Difficulty: Easy

30. The relationship between the manufacturer and supplier during the procurement cycle is very similar to the relationship between
- customer and retailer.
  - retailer and distributor.
  - distributor and manufacturer.
  - manufacturer and customer.

Answer: c

Difficulty: Moderate

31. The cycle view of the supply chain is useful when considering operational decisions, because
- it categorizes processes based on whether they are initiated in response to or in anticipation of customer orders.
  - it specifies the roles and responsibilities of each member of the supply chain.
  - processes are identified as either reactive or speculative.
  - it focuses on processes that are external to the firm.
  - it focuses on processes that are internal to the firm.

Answer: b

Difficulty: Hard

32. The push/pull view of the supply chain is useful when considering strategic decisions relating to supply chain design, because
- it categorizes processes based on whether they are initiated in response to or in anticipation of customer orders.
  - it specifies the roles and responsibilities of each member of the supply chain.
  - it clearly defines the processes involved and the owners of each process.
  - it focuses on processes that are external to the firm.

e. it focuses on processes that are internal to the firm.

Answer: a

Difficulty: Hard

33. Which of the following statements about pull processes is accurate?

- a. May also be referred to as speculative processes.
- b. Execution is initiated in anticipation of customer orders.
- c. At the time of execution, demand must be forecast.
- d. May also be referred to as reactive processes.
- e. None of the above are accurate.

Answer: d

Difficulty: Easy

34. Which of the following is **not** an accurate statement about pull processes?

- a. May also be referred to as speculative processes.
- b. Execution is initiated in response to a customer order.
- c. At the time of execution, demand is known with certainty.
- d. May also be referred to as reactive processes.
- e. All of the above are accurate.

Answer: a

Difficulty: Easy

35. Which of the following statements about push processes is accurate?

- a. May also be referred to as speculative processes.
- b. Execution is initiated in response to customer orders.
- c. At the time of execution, demand is known with certainty.
- d. May also be referred to as reactive processes.
- e. None of the above are accurate.

Answer: a

Difficulty: Easy

36. Which of the following is **not** an accurate statement about push processes?

- a. May also be referred to as speculative processes.
- b. Execution is initiated in anticipation of customer orders.
- c. At the time of execution, demand must be forecast.
- d. May also be referred to as reactive processes.
- e. All of the above are accurate.

Answer: d

Difficulty: Easy

37. Supply chain macro processes include which of the following?

- a. Customer Relationship Management (CRM)
- b. Internal Supply Chain Management (ISCM)
- c. Supplier Relationship Management (SRM)
- d. all of the above
- e. none of the above

Answer: d

Difficulty: Easy

38. Supply chain macro processes include which of the following?

- a. Internal Relationship Management (IRM)

- b. Customer Relationship Management (CRM)
- c. External Relationship Management (ERM)
- d. Supply Chain Relationship Management (SCRM)
- e. none of the above

Answer: b

Difficulty: Moderate

39. Supply chain macro processes include which of the following?
- a. Internal Relationship Management (IRM)
  - b. External Relationship Management (ERM)
  - c. Supplier Relationship Management (SRM)
  - d. Supply Chain Relationship Management (SCRM)
  - e. none of the above

Answer: c

Difficulty: Moderate

40. Activities involved in the Customer Relationship Management (CRM) macro process include
- a. planning of internal production and storage.
  - b. order fulfillment.
  - c. marketing.
  - d. supply planning.
  - e. demand planning.

Answer: c

Difficulty: Hard

41. Activities involved in the Customer Relationship Management (CRM) macro process include all of the following **except**
- a. marketing.
  - b. sales.
  - c. order management.
  - d. call center management.
  - e. All of the above are activities of CRM.

Answer: e

Difficulty: Moderate

42. Activities involved in the Internal Supply Chain Management (ISCM) macro process include
- a. marketing.
  - b. order fulfillment.
  - c. sales.
  - d. order management.
  - e. call center management.

Answer: b

Difficulty: Hard

43. Activities involved in the Internal Supply Chain Management (ISCM) macro process include all of the following **except**
- a. planning of internal production and storage.
  - b. order fulfillment.
  - c. supply planning.

d. order management.

Answer: d

Difficulty: Hard

44. Activities involved in the Supplier Relationship Management (SRM) macro process include
- a. planning of internal production and storage.
  - b. order fulfillment.
  - c. supplier evaluation and selection.
  - d. order management.

Answer: c

Difficulty: Moderate

45. Activities involved in the Supplier Relationship Management (SRM) macro process include all of the following **except**
- a. negotiation of supply terms.
  - b. design collaboration.
  - c. demand planning.
  - d. supplier evaluation and selection.
  - e. supply collaboration.

Answer: c

Difficulty: Hard

46. The phenomenal success of 7-Eleven Japan is attributed to
- a. being in the right place at the right time.
  - b. its supply chain design and management ability.
  - c. having 9000 locations.
  - d. serving fresh food.
  - e. none of the above

Answer: b

Difficulty: Moderate

47. A key issue facing Toyota is
- a. developing an internet marketing system.
  - b. whether to specialize in a particular market.
  - c. design of its global production and distribution network.
  - d. how to implement model changes.
  - e. all of the above

Answer: c

Difficulty: Hard

### **Essay/Problems**

1. Explain the 3 decision phases (categories) that must be made in a successful supply chain.

*Answer:* The 3 decision phases that occur within a supply chain are supply chain strategy (or design), supply chain planning and supply chain operation. Decisions

relate to the flow of information, product and funds. The difference between categories depends upon the frequency of each decision and the time frame over which it has an impact. During the supply chain strategy phase, a company determines what the chain's configurations will be, how resources will be allocated, and what processes each stage will perform. This will establish the structure of the supply chain for several years. Supply chain planning deals with decisions with a time frame from 3 months up to a year. The planning phase must work within the constraints established in the strategy phase. Planning decisions include which markets to supply from which locations, subcontracting of manufacturing, inventory policies and timing and size of marketing promotions. The supply chain operation phase operates on a weekly or daily time horizon and deals with decisions concerning individual customer orders.

*Difficulty: Hard*

2. Describe the cycle view of the processes within a supply chain.

*Answer:* The cycle view divides the supply chain into a series of 4 cycles between the 5 different stages of a supply chain. The cycles are the customer order cycle, replenishment cycle, manufacturing cycle and procurement cycle. The customer order cycle occurs at the customer/retailer interface and includes all processes directly involved in receiving and filling the customer. The replenishment cycle occurs at the retailer/distributor interface and includes all processes involved in replenishing retailer inventory. The manufacturing cycle typically occurs at the distributor/manufacturer (or retailer/manufacturer) interface and includes all processes involved in replenishing distributor (or retailer) inventory. The procurement cycle occurs at the manufacturer/supplier interface and includes all processes necessary to ensure that the materials are available for manufacturing according to schedule.

*Difficulty: Moderate*

3. Explain the push/pull view of the processes within a supply chain.

*Answer:* The push/pull view of the supply chain divides supply chain processes into two categories based on whether they are executed in response to a customer order or in anticipation of customer orders. Pull processes are initiated in response to a customer order. Push processes are initiated and performed in anticipation of customer orders. The push/pull boundary separates push processes from pull processes. This view is very useful when considering strategic decisions relating to supply chain design, because it forces a more global consideration of supply chain processes as they relate to the customer.

*Difficulty: Moderate*

4. Explain the three macro processes within a supply chain.

*Answer:* All processes within a supply chain can be classified into three macro processes which are Customer Relationship Management (CRM), Internal Supply Chain Management (ISCM), and Supplier Relationship Management (SRM). Customer Relationship Management (CRM) includes all processes that focus on the interface between the firm and its customers such as marketing, sales, call center management and order management. Internal Supply Chain Management (ISCM) includes all processes that are internal to the firm such as

finalization of demand and supply plans, preparation of inventory management policies, order fulfillment and planning of capacity. Supplier Relationship Management (SRM) includes all processes that focus on the interface between a firm and its suppliers such as evaluation and selection of suppliers, negotiation of supply terms and communication regarding new products and orders.

*Difficulty: Moderate*

5. Explain why supply chain flows are important.

*Answer:* Supply chain flows are important, because there is a close connection between the design and management of supply chain flows (product, information, and cash) and the success of a supply chain. The success of many companies can be directly traced to the design and management of an appropriate supply chain. The failure of many businesses can be linked directly to their inability to effectively design and manage supply chain flows.

*Difficulty: Moderate*