

Foundations of Operations Management, 4e Cdn. (Ritzman)

Chapter 2: Supply Chain Management

2.1 End-of-Chapter Problems

1) Supply-chain management is the synchronization of a firm's processes and those of its suppliers to match the flow of materials, services, and information with customer demand.

Answer: TRUE

Diff: 1 Type: TF

Reference: Introduction

2) Inventory is a stock of material used to satisfy customer demand or support the production of goods and services.

Answer: TRUE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

3) Work-in-process inventory is considered an input to the transformation processes of the firm.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

4) The finished goods of one firm may actually be the raw materials for another firm.

Answer: TRUE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

5) Backward integration describes the practice of gaining control over supplies by acquiring a controlling interest in one or more of a company's major suppliers.

Answer: TRUE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

6) Manufacturing firms typically enter into contracts with Tier 2 suppliers with the expectation that these suppliers will then incorporate the guidelines of these contracts into the agreements they in turn enter into with Tier 1 suppliers.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

7) The order-fulfillment process involves the activities to deliver a product or service to the customer.

Answer: TRUE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

8) Forward placement is a reduction in inventory and safety stock because of the merging of variable demands from customers.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

9) Forward placement means locating stock closer to the manufacturing facility.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

10) Vendor-managed inventories are an example of the forward placement tactic.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

11) Postponement is a tactic used by mass-customization firms to delay the customization of a product or service until the last possible moment.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

12) Make-to-stock firms tend to use the postponement tactic.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

13) The most used form of e-purchasing today is electronic data interchange.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

14) An electronic marketplace where buying and selling firms come together to do business is called a catalog hub.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

15) Green purchasing involves identifying, assessing, and managing the flow of environmental waste and finding ways to reduce it and minimize its impact on the environment.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

16) The competitive orientation to supplier relations is that the buyer and supplier are partners.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

17) Sole sourcing is the awarding of a contract for an item or service to only one supplier.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

18) Sole sourcing of an item is never a good tactic.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

19) Value analysis is a systematic effort to reduce the cost or improve the performance of products or services.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

20) In presourcing, suppliers are selected early in the concept development stage.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

21) Inventory turnover is obtained by dividing the average aggregate inventory value by sales per week at cost.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

22) The percentage of incomplete orders shipped is a performance measure for the purchasing process of supply chain management.

Answer: FALSE

Diff: 1 Type: TF

Reference: Measures of Supply-Chain Performance

23) Responsive supply chains work best with predictable demand.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

24) Responsive supply chains work best when frequent product introduction exists.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

25) Efficient supply chains work best when contribution margins are high.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

26) Efficient supply chains work best when product variety is low.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

27) Efficient supply chains use low capacity cushions.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

28) Efficient supply chains aggressively try to shorten lead time.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

29) A common disruption of the external supply chain is product and service mix changes.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

30) A common disruption of the external supply chain is engineering changes.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

31) A common disruption of the internal supply chain is information errors.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

32) The bullwhip effect is the general tendency toward increasing variation in demand and inventory levels as you move further away from the end customer in the supply chain.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply Chain Strategies

33) Because of the bullwhip effect, ordering patterns in supply chains typically show less variance the further upstream you move in the supply chain.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

34) Internal and external disruptions in the supply chain typically result in higher variability as you move upstream in the supply chain.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

35) Relative to centralized buying, localized buying has the advantage of increasing purchasing clout.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

36) Centralized purchasing is more likely to be followed for commodity-based purchases than for specialized parts and services.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

37) A cooperative orientation to supplier relations views negotiations between buyer and seller as a zero-sum game.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

38) The extreme situation of a cooperative orientation to supplier relations is sole sourcing.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

39) Offshoring is a supply chain strategy that involves moving processes to another country.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

40) Postponement is an organizational concept whereby members of the distribution channel are used as if they were assembly stations in the factory.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

41) In presourcing, suppliers are selected early in the concept-development stage.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

42) A catalog hub is a central distribution point where buyers may purchase items directly from manufacturers before the items are shipped to retailers.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

43) Green purchasing involves identifying, assessing, and managing the flow of environmental waste and finding ways to reduce it and minimize its impact on the environment.

Answer: TRUE

Diff: 2 Type: TF

Reference: Supplier Relationship Process

44) A cross-docking warehouse holds inventory from manufacturers until retailers are prepared to sell the items.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

45) The supplier relationship process focuses on the interaction of the firm and upstream suppliers.

Answer: TRUE

Diff: 2 Type: TF

Reference: Supplier Relationship Process

46) Purchasing power determines the clout that a firm has.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supplier Relationship Process

47) The order fulfillment process produces and delivers the service or product to the firm's customers.

Answer: TRUE

Diff: 1 Type: TF

Reference: Order Fulfillment Process

48) The performance of a logistics process is indirectly linked to its capacity and variability of demand.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

49) The customer relationship process addresses the interface between the supplier and its customers downstream in the supply chain.

Answer: FALSE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

50) Customer service is an important point of contact between the firm and its customers.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

51) The new service or product development process is a core process that fundamentally shapes the supply chain.

Answer: TRUE

Diff: 1 Type: TF

Reference: Supply-Chain Dynamics

52) The basic purpose of supply chain management is to

A) create an exclusive set of suppliers who will not supply your competitors.

B) link your customers together so that the flow of materials remains under control.

C) synchronize the operations of all suppliers with those of purchasing, production, distribution, and customers.

D) reduce the inventory by proper selection of customers and transportation modes.

Answer: C

Diff: 1 Type: MC

Reference: Introduction

53) Which one of the following is TRUE for supply chain management?

- A) Supply chain concept applies to both manufacturing and service organizations.
- B) Supply chain applies only to manufacturing because it deals with flow of materials.
- C) Supply chain is about suppliers and does not include distributors or customers.
- D) Supply chain includes any operation that deals with materials.

Answer: A

Diff: 1 Type: MC

Reference: Introduction

54) Which one of the following statements on inventory placement of finished goods is best?

- A) Forward placement might help reduce transportation cost.
- B) Forward placement is consistent with a competitive priority that calls for customization.
- C) Inventory pooling should be avoided when demand in various regions fluctuates month to month.
- D) Backward placement is consistent with a competitive priority that calls for fast delivery times.

Answer: A

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

55) The practice of locating stock closer to customers at a warehouse, distribution centre, wholesaler, or retailer is referred to as

- A) inventory pooling.
- B) vendor managed inventories.
- C) forward placement.
- D) channel assembly.

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

56) The practice of having the supplier monitor inventory levels at its customer and replenishing the stock as needed to avoid shortages is referred to as

- A) continuous replenishment vendor-managed inventory.
- B) inventory pooling.
- C) channel assembly of vendor-managed inventory.
- D) forward placement.

Answer: A

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

57) For improving the efficiency and productivity of a complex supply chain, a company should do which of the following?

- A) Never adopt backward vertical integration.
- B) Enter into agreements with first-tier suppliers, and let them manage their suppliers.
- C) Adopt backward vertical integration or enter into agreements with first-tier suppliers.
- D) Adopt backward vertical integration, but avoid writing agreements with first-tier suppliers.

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

58) Which one of the following statements is TRUE about purchasing?

- A) Purchasing must satisfy the firm's long-term supply needs.
- B) Purchasing's primary role should be placing and tracking orders.
- C) Purchasing's primary role is to negotiate lower prices.
- D) Purchasing's primary role is to negotiate prices and delivery dates.

Answer: A

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

59) Which one of the following statements regarding supplier selection criteria is TRUE?

- A) Suppliers should be selected on the basis of price only because the cost of materials is a significant portion of total product cost.
- B) Suppliers should be selected on the basis of quality, price, and delivery.
- C) Suppliers should be selected primarily on the basis of the shortest lead time because higher lead time increases the cost of inventory.
- D) Suppliers should be selected on the basis of quality because quality is always the most important characteristic of a product.

Answer: B

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

60) Which one of the following statements is TRUE about a cooperative orientation in supplier relationships?

- A) It cannot be implemented in Western countries because competitive bidding is more effective in that culture.
- B) It cannot be implemented in the Western countries because it always benefits the supplier.
- C) It requires all parts and subassemblies to be purchased from the same supplier.
- D) It requires few suppliers for each item or service.

Answer: D

Diff: 2 Type: MC

Reference: Supplier Relationship Process

61) One of the benefits of a cooperative orientation in supplier relationships is

- A) the buyer sometimes suggests ways to improve the supplier's operations.
- B) the supplier implements its own quality standards.
- C) the buyer does not have to share much information with the supplier.
- D) the supplier has complete freedom in choosing the delivery time.

Answer: A

Diff: 2 Type: MC

Reference: Supplier Relationship Process

62) Which one of the following statements is TRUE about a competitive orientation in supplier relationships?

- A) It tends to emphasize short-term advantages over long-term commitments.
- B) The supplier gains repeatability and can move toward a line flow process.
- C) The supplier is obliged to offer the lowest possible price every time.
- D) The supplier is obliged to deliver the material in the shortest possible time, every time.

Answer: A

Diff: 2 Type: MC

Reference: Supplier Relationship Process

63) Which one of the following statements is TRUE?

- A) A buying firm should always adopt a competitive orientation for a standard item with high demand.
- B) Single sourcing is always desirable for high demand items.
- C) Long-term contracts are consistent with a cooperative orientation to supplier relationships.
- D) The buyer always wins in a competitive orientation to supplier relationships.

Answer: C

Diff: 2 Type: MC

Reference: Supplier Relationship Process

64) Which one of the following statements correctly represents a benefit of centralized buying?

- A) Local managers have more control over their business.
- B) Purchases and production schedules are meshed more easily.
- C) Purchasing lead times may be shorter.
- D) Increased buying power can result in significant savings in purchasing costs.

Answer: D

Diff: 2 Type: MC

Reference: Supplier Relationship Process

65) Some manufacturers and service providers want to measure the performance of supply chain by the percentage of on-time deliveries. The main reason for this measure is

- A) it will discourage the competitors to enter the market.
- B) it measures the satisfaction levels of suppliers.
- C) increased on-time delivery increases revenue by inducing customers to buy more products from the firm.
- D) it helps accounting to debit customers' accounts promptly.

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

66) Which one of the following statements about the relation between financial and supply chain performance measures is TRUE?

- A) Longer delivery times require higher levels of working capital.
- B) Shorter new product development time decreases revenue.
- C) Higher inventory turns call for higher working capital requirement.
- D) Lower aggregate inventory value means higher current assets.

Answer: A

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

67) Of the following measures of supply chain performance, which is likely to have the most direct and measurable impact on a company's financial performance based on the reduction in the level of working capital required?

- A) percentage of suppliers' deliveries received on time
- B) percentage of incomplete orders shipped
- C) customer satisfaction with the order-fulfillment process
- D) time required to fulfill orders

Answer: D

Diff: 3 Type: MC

Reference: Measures of Supply-Chain Performance

68) Which of the following statements does NOT represent a positive link between supply chain performance and the financial status of a firm?

- A) Lowering the cost of purchased materials reduces the level of working capital required and has a positive impact on the contribution margin.
- B) Reduced inventory levels result in an increase in the percentage of partial orders shipped and an increased inventory turnover ratio.
- C) Percentage of orders shipped on time reduces the level of working capital required and supports increased sales.
- D) Reducing supplier lead times reduces the level of working capital required.

Answer: B

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

69) Last year, CMS Enterprises had total inventories (raw materials, work-in-process, and finished goods) of \$5.5 million. During this same year the cost of goods sold was \$22 million. The company operates 52 weeks per year. What is the total inventory (measured as weeks of supply) held by CMS Enterprises last year?

- A) less than or equal to 10 weeks of supply
- B) greater than 10 but less than or equal to 12 weeks of supply
- C) greater than 12 but less than or equal to 14 weeks of supply
- D) greater than 14 weeks of supply

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

70) Henderson Corporation is a supplier of alloy ball bearings to auto manufacturers in Windsor. Because of the specialized manufacturing process employed, considerable work-in-process and raw material inventories are created. The current inventory levels are \$1,152,000 and \$2,725,000, respectively. In addition, finished goods inventory is \$3,225,000, and sales (at cost) for the current year are expected to be about \$24 million. The inventory turnover that Henderson Corporation is currently expecting is

- A) less than 2.0.
- B) greater than or equal to 2.0 but less than 2.5.
- C) greater than or equal to 2.5 but less than 3.0.
- D) greater than or equal to 3.0.

Answer: D

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

71) Maple Leaf, Inc., a television manufacturer, would like to reduce its inventory. To this end, you are asked by the operations manager to assess its inventory level. You have the following information on inventories from last year's financial statement:

Raw materials	\$2,500,000
Work-in-process	\$1,000,000
Finished goods	\$ 800,000

In addition, the cost of goods sold last year (50 weeks) was \$15 million. What was the inventory turnover?

- A) less than or equal to 2
- B) greater than or equal to 2 but less than 3
- C) greater than or equal to 3 but less than 4
- D) greater than or equal to 4

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

72) The average inventory at Hamilton Industries, comprising raw materials, work-in-process, and finished goods, was found to be \$17.2 million last year. If the cost of goods sold per week averaged \$1.32 million, what was the inventory turnover experienced by Hamilton Industries? Assume the company had 50 working weeks per year.

- A) less than or equal to 3.50
- B) greater than or equal to 3.50 but less than 3.75
- C) greater than or equal to 3.75 but less than 4.00
- D) greater than or equal to 4.00

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

73) Efficient supply chain would be preferred when

- A) product variety is high.
- B) competitive priority is customization.
- C) demand is highly predictable.
- D) demand is unpredictable.

Answer: C

Diff: 2 Type: MC

Reference: Supply Chain Strategies

74) The type of goods for which efficient supply chain is appropriate is

- A) high product cost.
- B) frequent design changes.
- C) high contribution margin.
- D) standardized products.

Answer: D

Diff: 2 Type: MC

Reference: Supply Chain Strategies

75) Responsive supply chains would be preferred when

- A) product variety is low.
- B) demand is predictable.
- C) contribution margins are low.
- D) product variety is high.

Answer: D

Diff: 2 Type: MC

Reference: Supply Chain Strategies

76) The type of goods for which a responsive supply chain is appropriate are

- A) fashion goods.
- B) products with a long shelf life.
- C) expensive products.
- D) those with infrequent design changes.

Answer: A

Diff: 3 Type: MC

Reference: Supply Chain Strategies

77) A firm in the higher echelon of an efficient supply chain is likely to have

- A) high-capacity utilization.
- B) low inventory turns.
- C) high-capacity cushions.
- D) a flexible flow process.

Answer: A

Diff: 2 Type: MC

Reference: Supply Chain Strategies

78) It is desirable for a firm in the higher echelon of an efficient supply chain to have

- A) high-capacity cushions.
- B) delivery by air.
- C) a line flow process.
- D) high inventory investment.

Answer: C

Diff: 2 Type: MC

Reference: Supply Chain Strategies

79) It is recommended that a firm in the higher echelon of an efficient supply chain have

- A) delivery by air.
- B) high-capacity cushions.
- C) low inventory investments.
- D) low-capacity utilization.

Answer: C

Diff: 2 Type: MC

Reference: Supply Chain Strategies

80) Firms in a responsive supply chain are expected to have

- A) long delivery times.
- B) high inventory investments.
- C) flexible flow process.
- D) low-capacity cushions.

Answer: C

Diff: 3 Type: MC

Reference: Supply Chain Strategies

81) It is desirable for a firm in a responsive supply chain to have

- A) low-capacity cushions.
- B) delivery by railroad.
- C) high-capacity utilization consistent with high-volume delivery.
- D) low inventory investments consistent with fast delivery times.

Answer: D

Diff: 2 Type: MC

Reference: Supply Chain Strategies

82) It is recommended that a firm in a responsive supply chain have

- A) volume flexibility.
- B) flexible quality policy.
- C) standardized product.
- D) low-capacity cushion.

Answer: A

Diff: 2 Type: MC

Reference: Supply Chain Strategies

83) The objective of a firm in a responsive supply chain is likely to be realized if it has a

- A) standardized product.
- B) short lead time.
- C) low-capacity cushion.
- D) line flow process.

Answer: B

Diff: 2 Type: MC

Reference: Supply Chain Strategies

84) One source of disruption caused by the internal supply chain is

- A) forecast error.
- B) underfilled shipments.
- C) volume changes.
- D) late deliveries.

Answer: A

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

85) One source of disruption caused by the external supply chain is

- A) product or sales promotions.
- B) new product or service introduction.
- C) late deliveries.
- D) engineering changes.

Answer: C

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

86) Possible causes of disruption due to internal supply chain are

- A) late deliveries.
- B) machine breakdowns or inexperienced workers.
- C) product and service mix changes.
- D) underfilled shipments.

Answer: B

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

87) The general tendency toward increasing variation in demand and inventory levels as we move further away from the end customer in the supply chain is referred to as

- A) internally generated shortages.
- B) bullwhip effect.
- C) capacity cushions.
- D) continuous replenishment.

Answer: B

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

88) The tactic of packing products on incoming shipments so that they can be easily sorted and shipped out of intermediate warehouses in a supply chain is referred to as

- A) channel assembly.
- B) cross docking.
- C) vendor managed inventory.
- D) inventoried pooling.

Answer: B

Diff: 1 Type: MC

Reference: Order Fulfillment Process

89) The phenomenon in supply chains whereby ordering patterns show increasing variances the further upstream you move in the supply chain is referred to as

- A) inventory pooling.
- B) postponement.
- C) forward placement.
- D) bullwhip effect.

Answer: D

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

90) What term do we use for a company arranging payments to suppliers and distributors to provide needed services and materials in order to perform those processes the organization does not perform itself?

- A) backward integration
- B) forward integration
- C) outsourcing
- D) system design

Answer: C

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

91) Which of the following is an advantage of the postponement technique?

- A) reduction in automation
- B) better quality of the product
- C) reduction in training costs
- D) reduction in inventory investment

Answer: D

Diff: 2 Type: MC

Reference: Supply Chain Strategies

92) Which of the following best describes vendor managed inventory?

- A) There is minimal purchasing-oriented paperwork.
- B) The supplier maintains the inventory for the buyer.
- C) The supplier delivers only what the customer needs.
- D) There is only one supplier for all units of a particular product.

Answer: B

Diff: 2 Type: MC

Reference: Order Fulfillment Process

93) Which one of the following is TRUE for supply chain management?

- A) Supply chain is about suppliers and does not include distributors or customers.
- B) Supply chain applies only to manufacturing because it deals with flow of materials.
- C) Supply chain applies to both manufacturing and service organizations.
- D) Supply chain includes any operation that deals with materials.

Answer: C

Diff: 2 Type: MC

Reference: Supply Chain Strategies

94) Which of the following changes would decrease the likelihood of the bullwhip effect?

- A) instituting a policy of no discounts or promotion
- B) changing the mix of items in an order
- C) sending late deliveries of an order
- D) sending partial shipments of an order

Answer: A

Diff: 2 Type: MC

Reference: Supply-Chain Dynamics

95) The practice whereby a manufacturer has inventories of materials on consignment from its suppliers falls under the scope of

- A) vendor-managed inventories.
- B) inventory pooling control.
- C) virtual distribution.
- D) electronic inventory control.

Answer: A

Diff: 1 Type: MC

Reference: Order Fulfillment Process

96) Which location movement would fall under forward placement?

- A) from the wholesaler to the manufacture
- B) from the retailer to the manufacturer
- C) from the manufacturer to a distribution centre
- D) from the retailer to the wholesaler

Answer: C

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

97) One of the benefits of a cooperative orientation in supplier relationships would be

- A) the supplier implements its own quality standards.
- B) the buyer does not have to share much information with the supplier.
- C) the supplier has complete freedom in choosing the delivery time.
- D) the buyer sometimes suggests ways to improve the supplier's operations.

Answer: A

Diff: 2 Type: MC

Reference: Supplier Relationship Process

98) Acme Corp averages \$15 million worth of inventory in all of its worldwide locations. The enterprise operates 51 weeks a year with each week averaging \$3 million in sales (at cost). Determine the inventory turnover.

- A) 10.2 turns
- B) 5 turns
- C) 1.13 turns
- D) 19 turns

Answer: A

Diff: 2 Type: MC

Reference: Measures of Supply-Chain Performance

99) _____ seeks to synchronize a firm's processes and those of its suppliers to match the flow of materials, services, and information with customer demand.

Answer: Supply-chain management

Diff: 1 Type: SA

Reference: Introduction

100) _____ is a stock of material used to satisfy customer demand or support the production of goods and services.

Answer: Inventory

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

101) _____ are inventories needed for the production of goods and services; they are considered the inputs to the transformation process.

Answer: Raw materials

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

102) _____ consists of items such as components or assemblies needed for a final product in manufacturing.

Answer: Work-in-process (WIP)

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

103) _____ are the items sold to a firm's customer.

Answer: Finished goods

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

104) _____ is the management of the acquisition process, which includes deciding which suppliers to use, negotiating contracts, and deciding whether to buy locally.

Answer: Purchasing

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

105) _____ is the management of the transformation process devoted to producing the product or service.

Answer: Production

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

106) The _____ process involves the activities required to register the need for a product or service and to confirm the acceptance of the order.

Answer: order-placement

Diff: 2 Type: SA

Reference: Managing the Customer Interface

107) The _____ process involves the activities required to deliver a product or service to a customer.

Answer: order-fulfillment

Diff: 2 Type: SA

Reference: Order Fulfillment Process

108) _____ is a reduction in inventory and safety stock because of the merging of variable demands from customers.

Answer: Inventory pooling

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

109) _____ involves locating the stock closer to customers at a warehouse, distribution centre, or retailer.

Answer: Forward placement

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

110) _____ is a technology that enables the transmission of routine business documents having a standard format from computer to computer over telephone or direct leased lines.

Answer: Electronic data interchange (EDI)

Diff: 2 Type: SA

Reference: Supplier Relationship Process

111) A(n) _____ is an electronic marketplace where buying and selling firms come together to do business.

Answer: exchange

Diff: 2 Type: SA

Reference: Supplier Relationship Process

112) _____ is a supplier relation that views negotiations between buyer and seller as a zero-sum game: whatever one side loses, the other side gains.

Answer: Competitive orientation

Diff: 2 Type: SA

Reference: Supplier Relationship Process

113) _____ is a supplier relation in which the buyer and seller are partners, each helping the other as much as possible.

Answer: Cooperative orientation

Diff: 2 Type: SA

Reference: Supplier Relationship Process

114) _____ is the awarding of a contract for an item or service to only one supplier.

Answer: Sole sourcing

Diff: 2 Type: SA

Reference: Supplier Relationship Process

115) _____ is a systematic effort to reduce the cost or improve the performance of products and services, either purchased or produced.

Answer: Value analysis

Diff: 2 Type: SA

Reference: Supplier Relationship Process

116) _____ is the total of all items held in inventory for a firm.

Answer: Average aggregate inventory value

Diff: 2 Type: SA

Reference: Supplier Relationship Process

117) _____ is an inventory measure obtained by dividing the average aggregate inventory value by sales per week at cost.

Answer: Weeks of supply

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

118) _____ is an inventory measure obtained by dividing annual sales at cost by the average aggregate inventory value maintained during the year.

Answer: Inventory turns

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

119) The _____ process focuses on the interaction of the firm and upstream suppliers.

Answer: supplier relationship

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

120) _____ power determines the clout that a firm has.

Answer: Purchasing

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

121) The _____ process produces and delivers the service or product to the firm's customers.

Answer: order fulfillment

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

122) The performance of a(n) _____ process is directly linked to its capacity and variability of demand.

Answer: logistics

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

123) The _____ process addresses the interface between the firm and its customers downstream in the supply chain.

Answer: customer relationship

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

124) _____ is an important point of contact between the firm and its customers.

Answer: Customer service

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

125) The _____ process is a core process that fundamentally shapes the supply chain.

Answer: new service or product development

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

126) The new service/product development process begins with _____ and ends with the _____ of the new offering.

Answer: design, launch

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

127) Discuss the trade-offs with locating the inventory at the factory versus locating it closer to the customer at a warehouse, distribution centre, wholesaler, or retailers.

Answer: When inventory is located at the factory, a reduction in inventory will occur because of inventory pooling. A drawback is that added shipping costs occur due to uneconomical shipping quantities. Additionally, placing inventory closer to customers yields faster delivery time.

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

128) What are the different types of e-purchasing?

Answer: Different approaches include EDI, catalog hubs, exchanges, and auctions.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

129) Define EDI.

Answer: Electronic data interchange is a standardized data transmittal format for computerized communications between organizations.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

130) For purchasing nonstandard items, what is the advantage of using the Internet over using traditional purchasing systems?

Answer: Nonstandard items are those with no blanket order. Using the Internet for these items can reduce the ordering lead time and purchasing costs. It also lends itself to comparison shopping, rapid ordering, and reduction in inventory.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

131) What the is radio frequency identification?

Answer: RFID is a method for identifying items to the use of radio signals from a tank attached to them. The tag has information about the item and sends signals to a device that can read the information and even write new information onto the tag.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

132) Briefly describe competitive orientation, as it applies to supplier relations.

Answer: Competitive orientation is a supplier relation that views negotiations between buyer and seller as any zero-sum game; that is, whatever one side loses, the other side gains; short-term advantages are prized over long-term commitments.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

133) Briefly state what responsive supply chains are.

Answer: Responsive supply chains focus is on reaction time to meet rapidly changing demand with judiciously placed inventories along the supply chain to meet peak demand.

Diff: 2 Type: SA

Reference: Supply-Chain Dynamics

134) Describe value analysis.

Answer: A systematic effort to reduce the cost or improve the performance of products or services, either purchased or produced.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

135) Describe green purchasing.

Answer: Using environmental criteria in purchasing decisions (for inputs) to favour suppliers with strong environmental management systems, performance, or certification.

Diff: 2 Type: SA

Reference: Supplier Relationship Process

136) What is the order-fulfillment process?

Answer: The activities required to deliver a product or service to a customer.

Diff: 2 Type: SA

Reference: Order Fulfillment Process

137) Define inventory.

Answer: Inventory is any idle resource held for the future that will bring a future benefit to the company.

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

138) What is the purpose of carrying safety stock?

Answer: Additional inventory is carried to smooth uses during periods of erratic demand.

Diff: 1 Type: SA

Reference: Measures of Supply-Chain Performance

139) Give three supply chain process measures applying to order placement.

Answer: percentage of orders taken accurately

time to complete the order placement process

customer satisfaction with the order placement process

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

140) Regarding the supplier relationship, name four supply chain process measures.

Answer:

percentage of suppliers deliveries on time

suppliers' lead times

percentage of defects in purchased materials and services

cost of purchase materials and services

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

141) What is inventory turnover?

Answer: A measure of the rate at which inventory is consumed, obtained by dividing annual sales at cost by the average aggregate inventory value maintained during the year.

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

142) Describe the weeks of supply measure.

Answer: An inventory measure obtained by dividing the average aggregate inventory value by sales per week at cost.

Diff: 2 Type: SA

Reference: Measures of Supply-Chain Performance

143) Describe presourcing.

Answer: A level of supplier involvement in which suppliers are selected early in a products concept development stage and are given significant, if not total, responsibility for the design of certain components or systems.

Diff: 2 Type: ES

Reference: Supplier Relationship Process

144) Compare and contrast competitive orientation versus cooperative orientation for supplier relations.

Answer: Competitive orientation is where supplier relations are viewed as a negotiation between buyer and seller. It is generally considered a zero-sum game—one side wins, the other loses. Cooperative orientation is when the buyer and seller are partners, each one helping the other as much as possible. Generally, a cooperative orientation means long-term commitment, joint work on quality, and support by the buyer of the supplier's managerial, technological, and capacity development. Sharing of information takes place in both directions.

Diff: 2 Type: ES

Reference: Supplier Relationship Process

145) Compare and contrast efficient versus responsive supply chains.

Answer: The purpose of efficient supply chains is to coordinate the flow of materials and services so as to minimize inventories and maximize the efficiency of the manufacturers and services providers in the chain. Responsive supply chains are designed to react quickly to market demands by positioning inventory and capacities in order to hedge against uncertainties in demand. Efficient supply chains work best where demand is predictable with low forecast errors; competitive priorities are low cost, consistent quality, and on-time deliveries; new product introduction is low; and profit margins are low. Responsive supply chains work best when demand is unpredictable, with high forecast errors; competitive priorities are development speed, fast delivery times, customization, high-performance design quality; new product introduction is frequent; contribution margins are high; and product variety is high. Efficient supply chains should use a make-to-stock or standardized services operations strategy; low-capacity cushion; low inventory investment; shorten lead time without increasing costs; and emphasize fast delivery time, customization, volume flexibility, and high-performance design quality. Responsive supply chains should use assemble-to-order, make-to-order, or customized services emphasizing product or service variety; high-capacity cushions; inventory levels set to enable fast delivery time; aggressively shorten lead time; and emphasizes fast delivery time, customization, volume flexibility, and high-performance design quality.

Diff: 3 Type: ES

Reference: Supplier Relationship Process

146) List and describe typical disruptions to the external supply chains.

Answer: Typical disruptions include volume changes, product and service mix changes, late deliveries, and underfilled shipments. Volume changes occur when customers change the quantity of the product or service they have ordered for a specific date or unexpectedly demand more of a standard product or service. Product or service mix changes occur when customers change the mix of items in an order and cause a ripple effect throughout the supply chain. Late deliveries of materials or delays in essential services can force a firm to switch its schedule from production of one product model to another. Finally, suppliers that send partial shipments do so because of disruptions at their own plants.

Diff: 2 Type: ES

Reference: Supply-Chain Dynamics

147) List and describe typical disruptions to the internal supply chain.

Answer: Typical disruptions include internally generated shortages, engineering changes, new product or service introductions, product or service promotions, and information errors. Internally generated shortages are the shortage of parts that result from machine breakdowns or inexperienced workers. Engineering changes are changes to designs. The introduction of new products or services can cause disruptions. Product or service promotions are a common practice of firms producing standard products or services and can cause a spike in demand. Finally, information errors, such as demand forecast errors or physical count errors, can cause disruptions.

Diff: 2 Type: ES

Reference: Supply-Chain Dynamics

148) Compare and contrast efficient versus responsive supply chains.

Answer: The purpose of efficient supply chains is to coordinate the flow of materials and services to minimize inventories and maximize the efficiency of the manufacturers and service providers in the chain. Responsive supply chains are designed to react quickly to market demands by positioning inventory and capacities to hedge against uncertainties in demand. Efficient supply chains work best where demand is predictable with low forecast errors; competitive priorities are low cost, consistent quality, and delivered on time; new-product introduction is low; and profit margins are low. Responsive supply chains work best when demand is unpredictable with high forecast errors. Competitive priorities are development speed, fast delivery times, customization, high-performance design quality; new product-introduction is frequent; contribution margins are high; and product variety is high. Efficient supply chains should use a make-to-stock or standardized services operations strategy, low-capacity cushion, and low inventory investment. They should shorten lead time without increasing costs and emphasize fast delivery time, customization, volume flexibility, and high-performance design quality. Responsive supply chains should use assemble-to-order, make-to-order, or customized services emphasizing product or service variety; high-capacity cushions; and inventory levels set to enable fast delivery time. They should aggressively shorten lead time and emphasize fast delivery time, customization, volume flexibility, and high-performance design quality.

Diff: 3 Type: ES

Reference: Supply Chain Strategies

149) For supplier relations, compare and contrast competitive orientation versus cooperative orientation.

Answer: Competitive orientation views supplier relations as a negotiation between buyer and seller. It is generally considered a zero-sum game: that is, one side wins, the other loses. In cooperative orientation, the buyer and seller are partners, each one helping the other as much as possible. Generally, a cooperative orientation means long-term commitment, joint work on quality, and support by the buyer of the supplier's managerial, technological, and capacity development. Sharing of information takes place in both directions.

Diff: 2 Type: ES

Reference: Supplier Relationship Process

150) Discuss the trade-offs with locating the inventory at the factory versus locating it closer to the customer at a warehouse, distribution centre, wholesaler, or retailers.

Answer: Locating inventory at a company's factory or warehouse constitutes centralized placement, thereby allowing a firm to take advantage of inventory pooling. Inventory pooling permits the producer to reduce the total inventory in the system, yet retain high service levels since one customer's high demand may be offset by another customer's low demand. The disadvantage of holding inventory in one location is the additional expense and time required to get product in the hands of the customer. Another approach to inventory location is forward placement. Forward placement reduces delivery times and puts the inventory closer to the customer so that in some cases (when it is located at a retailer), it can be seen and might trigger a purchase. The disadvantages of forward placement run counter to the advantages of pooling.

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

151) Describe vendor managed inventory (VMI). How is it related to outsourcing? Cite an example from your experiences as a shopper.

Answer: In vendor managed inventory, the supplier maintains material for the buyer, often delivering directly to the buyer's using department. It is a form of outsourcing, because the buying firm has transferred the shipping, stocking, and receiving tasks to an external vendor. There are many instances of VMI in today's retail model; shelves of snack foods and soft drinks are routinely managed by the distributor, not the retailer.

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

152) What situations typically favour the strategy of developing a virtual supply chain?

Answer: The virtual supply chain is favoured by managers in the following situations and offers a number of advantages:

When demand is highly volatile, particularly if overall volumes are low, the risks for holding inventories can prove costly for the firm. In addition, investments in inventory, equipment, warehouses, and personnel to operate and order fulfillment process may be prohibitively high. A more cost effective approach may be to find a supplier that is supplying the same stock item for other firms with similar demand uncertainties. The suppliers can smooth the random fluctuations and demands from multiple customers and provide the item at a cost-effective price, with less risk of stockouts.

When high service or product variety is important, partnering with a supplier can broaden the provision of services or products dramatically. In addition, the firm can have the freedom to select from a wide variety of wholesalers, service providers, and manufacturers, thereby providing the firm with the flexibility to match dynamic competitive priorities.

When there are lower costs due to economies of scale at suppliers, a supplier may handle much higher volumes than the firms doing the outsourcing because the supplier may have a number of customers for the same service or product. This added volume opens the possibility that the cost of the outsourcing firm will be much lower than if the order fulfillment process were done in-house.

When there are lower transportation costs, retailers realize the advantage of lower transportation costs. With drop shipping in a virtual supply chain, the only transportation cost is shipping the goods from a wholesaler to the customer.

Diff: 3 Type: ES

Reference: Measures of Supply-Chain Performance

153) What makes vertical integration attractive as a strategic decision in the design of a firm's supply chain and what does forward and backward integration in the supply chain mean?

Answer: A firm tends to choose vertical integration when it has the skills, volume, and resources to perform processes at a lower cost and produce higher-quality goods, and services than outside groups can. Doing the work in-house may mean better quality and more timely delivery. Also, it means taking better advantage of the firm's human resources, equipment, and space. Extensive vertical integration is generally attractive when input items are high because high volumes allows for task specialization and greater efficiency. Backward integration means the firm's movement upstream toward the sources of raw materials and parts. Forward integration means a firm's movement downstream by acquiring channels of distribution, finished goods manufacturing, or supplemental service.

Diff: 3 Type: ES

Reference: Supply Chain Strategies

154) Discuss the principal advantages and potential disadvantages of having more centralized rather than localized buying.

Answer: Centralized buying has the advantage of increasing purchasing clout. Increased buying power can mean getting better service, ensuring long-term supply availability, or developing new supplier capability. Companies with overseas suppliers favour centralization because of the specialized skills needed to buy from foreign sources. Buyers also need to understand international commercial and contract law regarding the transfer of goods and services. Another trend that favours centralization is the growth of computer-based information systems and the Internet, which gives specialists at headquarters access to data previously available only at the local level. The biggest disadvantage of centralized buying is loss of control at the local level. When plants are divisions are evaluated as profit or cost centres, centralized buying is undesirable for items unique to a particular facility. These items should be purchased locally whenever possible. The same holds for purchases that must be closely meshed with production schedules. Further, localized buying is an advantage when the firm has major facilities in foreign countries, because the managers there, often foreign nationals, have a much better understanding of the culture than a staff would at the home office. Centralized purchasing often constitutes longer lead times and another hierarchical level of the organization, which could slow decision making and hurt responsiveness.

Diff: 3 Type: ES

Reference: Supplier Relationship Process

155) Explain what the following four approaches to e-purchasing consist of: electronic data interchange, catalogue hubs, exchanges, and auctions.

Answer: Electronic data interchange or EDI is a technology that enables the transmission of routine business documents having a standard format from computer to computer over telephone or direct leased lines. Special communications software translates documents into and out of a generic form, allowing organizations to exchange information even if they have different hardware and software components.

Catalogue hubs are the posting of a centralized electronic catalogue online that enables employees to place orders for preapproved items. Suppliers post their catalogue of items on the hub, and buyers select what they need and purchase them electronically. The catalogue that the buying firm's employees see consists only of the approved items and their negotiated prices. The hub connects the firm to potentially hundreds of suppliers through the Internet, saving the cost of EDI, which requires one-to-one connections to individual suppliers.

An exchange is an electronic marketplace for buying firms selling firms come together to do business. The exchange maintains relationships with buyers and sellers, making it easy to do business without the aspect of contract negotiations or other sorts of long-term conditions. Exchanges are often used for "spot" purchases, which are needed to satisfy in immediate need at the lowest possible cost.

Auction is an extension of the exchange in which firms place competitive bids to buy something. For example excess capacity or materials can be offered for sale to the highest bidder. For reverse auctions, suppliers bid for contracts with buyers.

Diff: 3 Type: ES

Reference: Supplier Relationship Process

156) Explain what the technique of cross-docking involves.

Answer: Cross-docking is the packing of products on incoming shipments so that they can be easily sorted at intermediate warehouses and immediately transferred for outgoing shipment based on the final destinations. Cost of operations can be lowered and the delivery speed can be enhanced with such a technique. Inbound shipments must be tightly coordinated with outbound shipments for cross-docking to work. The warehouse becomes a short-term staging area for organizing efficient shipments to customers. The benefits of cross-docking include reductions in inventory investment, storage space requirements, handling costs, and lead times, as well as increased inventory turnover and accelerated cash flow.

Diff: 3 Type: ES

Reference: Customer Relationship Process

157) In terms of the decision of where to locate inventory within the supply chain, explain what inventory pooling and forward placement of inventory mean.

Answer: Inventory pooling is a reduction in inventory and safety stock because of the merging of variable demands from customers. A higher than expected demand from one customer can be offset by lower than expected demand from another. However, a disadvantage of placing the entire inventory at one location is the added cost of shipping smaller, uneconomical quantities directly to the customers, typically over long distances.

Forward placement is the locating of stock closer to customers at a warehouse, distribution centre, wholesaler, or retailer. Forward placement can have two advantages for the order fulfillment process: faster delivery times and reduced transportation costs. These factors often stimulate sales. As inventory is placed closer to the customer, the pooling effect of the inventories is reduced because safety stocks for the item must increase to take care of uncertain demands. However, the time to get the product to customers reduced. Consequently, service to customers is quicker, and the firm can take advantage of the larger, less costly shipments to distribution centres from a manufacturing plant, at the expense of larger overall inventories.

Diff: 3 Type: ES

Reference: Customer Relationship Process

158) What is the value analysis and what are some of the questions that value analysis may answer?

Answer: Value analysis is an organized team effort to reduce the costs of purchased parts and materials. Value analysis seeks to answer questions such as: What is the function of the item? Is the functions necessary? What does the item cost? What else will perform this function and at what cost?

Diff: 2 Type: ES

Reference: Supplier Relationship Process

159) How are outsourcing and vertical integration related? Can a single firm successfully do both?

Answer: Outsourcing transfers what were traditional internal activities to outside vendors. It is a way of increasing specialization which allows the firm to focus on its core strengths, and not try to do all possible tasks. Vertical integration is much the opposite, decreasing a firm's specialization so that it can perform additional functions along its supply chain. Vertical integration has become increasingly difficult in the face of increasing specialization. It seems unlikely that firms which make significant use of outsourcing would do much vertical integration, but it is possible that a firm's set of competitive advantages would support outsourcing in some functions and vertical integration in others.

Diff: 3 Type: ES

Reference: Supply-Chain Dynamics

160) Can an organization's plans for vertical integration be supported by the tools of make-or-buy analysis? Explain; provide an example

Answer: Yes; the decision to acquire the provider of an upstream operation is the same as choosing to make whatever has been provided. Not to acquire is the equivalent of "buy." The analysis also holds for downstream operations: the acquisition of a delivery fleet is equivalent to "make" in the downstream operation of distribution.

Diff: 3 Type: ES

Reference: Supply-Chain Dynamics

161) Support the reasons for buying in the make-or-buy decision.

Answer: The reasons for buying in the make-or-buy decision include freeing management to focus on primary business; lower acquisition cost; preserve supplier commitment; obtain technical or managerial ability; inadequate capacity; reduce inventory costs; ensure alternative sources of supply; inadequate managerial or technical resources; reciprocity; and item is protected by patent or trade secret.

Diff: 3 Type: ES

Reference: Supply Chain Strategies

162) List the reasons for making in the make-or-buy decision.

Answer: The reasons for making in the make-or-buy decision include increase or maintain size of the company (management preference); lower production cost; unsuitable suppliers; ensure adequate supply; utilize surplus labour facilities and make a marginal contribution; obtain the desired quality; remove supplier collusion; obtain a unique item that would entail a prohibitive commitment for a supplier; maintain organizational talents; and protect proprietary design or quality.

Diff: 3 Type: ES

Reference: Supply Chain Strategies

163) Last year, RJT Enterprises had total inventories (raw materials, work-in-process, and finished goods) of \$7.5 million. During this same year the cost of goods sold was \$30 million. The company operates 50 weeks per year.

a. What is their total inventory (measured as weeks of supply)?

b. What is their inventory turnover?

Answer:

a. $\text{Weeks of supply} = \text{average aggregate inventory value} / \text{weekly sales at cost}$
 $= 7.5 \text{ million} / (30 \text{ million} / 50) = 12.5 \text{ weeks}$

b. $\text{Inventory turnover} = \text{annual sales (at cost)} / \text{average aggregate inventory value}$
 $= 30 \text{ million} / 7.5 \text{ million} = 4$

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

164) Rome Corporation is a supplier of ball bearings. Because of the specialized manufacturing process employed, considerable work-in-process and raw material inventories are created. The current inventory levels are \$1,500,000 and \$3,775,000, respectively. In addition, finished goods inventory is \$3,500,000, and sales (at cost) for the current year are expected to be about \$28 million. Assume they operate 50 week per year.

- a. What is their total inventory (measured as weeks of supply)?
- b. What is their inventory turnover?

Answer:

- a. Weeks of supply = average aggregate inventory value/weekly sales at cost
 $= (1,500,000 + 3,775,000 + 3,500,000) / (28,000,000 / 50) = 15.7$ weeks
- b. Inventory turnover = annual sales (at cost)/average aggregate inventory value
 $= 28 \text{ million} / 8.775 \text{ million} = 3.19$

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

165) A television manufacturer would like to reduce its inventory. To this end, you are asked by the operations manager to assess its inventory level. You have the following information on inventories from last year's financial statement:

Raw materials	\$1,500,000
Work-in-process	\$1,200,000
Finished goods	\$800,000

In addition, the cost of goods sold last year (50 weeks) was \$20 million.

- a. What is their total inventory (measured as weeks of supply)?
- b. What is their inventory turnover?

Answer:

- a. Weeks of supply = average aggregate inventory value/weekly sales at cost
 $= (1,500,000 + 1,200,000 + 800,000) / (20,000,000 / 50) = 7.5$ weeks
- b. Inventory turnover = annual sales (at cost)/average aggregate inventory value
 $= 20 \text{ million} / 3 \text{ million} = 6.67$

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

166) The average inventory comprising raw materials, work-in-process, and finished goods, was found to be \$18.4 million last year. If the cost of goods sold per week averaged \$1.12 million. Assume the company had 50 working weeks per year.

- a. What is their total inventory (measured as weeks of supply)?
- b. What is their inventory turnover?

Answer:

- a. Weeks of supply = average aggregate inventory value/weekly sales at cost
 $= 18.4 \text{ million} / 1.12 \text{ million} = 16.43$ weeks
- b. Inventory Turnover = annual sales (at cost)/average aggregate inventory value
 $= (1.12 \text{ million} * 50 \text{ weeks}) / 18.4 \text{ million} = 3.04$

Diff: 2 Type: ES

Reference: Measures of Supply-Chain Performance

167) Briefly describe the term refers to as Customer relationship process.

Answer: The customer relationship process addresses the interface between the firm and its customers downstream in the supply chain. We use the term customer to refer to an entity the firm is trying to serve, which might be a consumer or a business. The purpose of the customer relationship process, which supports customer relationship management (CRM) programs, is to identify, attract, and build relationships with customers and to facilitate the transmission and tracking of orders.

Diff: 2 Type: ES

Reference: Customer Relationship Process