# *Operations Management Managing Global Supply Chains 1st edition Venkataraman Test Bank*

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**Chapter 2: Operations and Supply Chain Strategies**
**Test Bank**

## Multiple Choice

1. A firm's strategy on how to compete results from decisions made at _____.
a. the corporate level
b. the functional level
c. the business level
d. the divisional level
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Levels of Strategic Planning
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

2. A functional strategy is _____.
a. at a higher level than the department-level strategy
b. at a lower level than the department-level strategy
c. the same as the department level strategy
d. often referred to as a tactic
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Levels of Strategic Planning
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

3. Corporate strategy is formulated by _____.
a. the organization's top managers
b. the entire organization
c. third-party consultants
d. people in charge of marketing and manufacturing
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Easy
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4. Corporate strategy asks, _____.
a. Which industries should we enter?
b. What products should we offer?
c. At what price should we sell these products?
d. In which markets should we advertise?
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

5. Among the different strategies, corporate strategy_____.
a. is broadest in scope
b. has the shortest time horizon
c. guides the operations in a given function
d. all of these
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

6. Corporate strategy guides decisions about _____.
a. what businesses to acquire
b. how to compete in a business
c. what products to offer
d. how to design a given product
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

7. The allocation of resources between different strategic business units of the corporations is guided by _____.
a. corporate strategy

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b. business strategy
c. departmental strategy
d. divisional strategy
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

8. The hierarchy of strategies implies that a higher level strategy _____.
a. guides the strategy below it
b. is guided by the internal environment
c. guides tactical decisions in different businesses
d. is responsible for product design
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems

9. The SCOR model _____.
a. has 42 key indicators
b. uses metrics organized in a hierarchical structure
c. was developed during World War II
d. was originally used by Henry Ford
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Evaluating the Performance of a Supply Chain Strategy
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

10. Which of the following is NOT one of the performance objectives included in the "triple bottom line"?
a. the economic value the company creates
b. the environmental value the company creates
c. the philosophical value the company creates
d. the social value the company creates
Ans: C
Cognitive Domain: Comprehension (Understand)

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Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Corporate Strategy
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

11. Which of the following statements is true about where some countries are with regard to sustainable supply chains?
a. U.S. companies are ahead of companies in Europe.
b. Firms in India and China have caught up with European countries.
c. both A and B
d. neither A nor B
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: 2-7. Describe what companies are doing to incorporate sustainability into their supply chain strategy and the problems they face in doing so.
Answer Location: Sustainable Supply Chain Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

12. The triple bottom line is a way to _____.
a. ensure a minimum level of returns for the company's stockholders
b. ensure that society is compensated for any harm (e.g., pollution) imposed on it
c. both A and B
d. neither A nor B
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

13. Sustainability in the context of creating environmental value refers to _____.
a. ensuring a steady and long-term stream of revenues
b. ensuring a steady and long-term stream of profits
c. ensuring that current operations do not deplete resources now and for the future
d. ensuring a steady and long-term stream of sales
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Medium

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AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

14. A company that creates economic value but exploits the environment and natural resources may _____.
a. run out of raw materials required for its operations
b. overprice its products
c. be forced to offer products of poor quality
d. have high production costs
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

15. Companies that do not include environmental costs into the cost of production
a. Have an advantage over those companies that do so
b. May face serious problems in the long run
c. Are conscientious corporate citizens
d. Are likely to have high production costs
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

16. The carbon footprint of a supply chain refers to _____.
a. the amount of greenhouse gases produced
b. the use of energy-efficient lighting
c. the use of recycled materials
d. all of these
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: 2-7. Describe what companies are doing to incorporate sustainability into their supply chain strategy and the problems they face in doing so.
Answer Location: Sustainable Supply Chain Strategies
Difficulty Level: Medium
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17. In evaluating environmental performance, life cycle assessment (LCA) refers to _____.
a. the environmental impact a product has over the lifetime of the customer
b. the environmental impact a product has over the product's life cycle
c. both A and B
d. neither A nor B
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

18. In 2001, Nike admitted that it used child labor to produce its expensive sportswear products, while paying the children just pennies a day. This is an example of _____.
a. creating economic value in the short run
b. being a conscientious corporate citizen
c. being socially responsible
d. following a sustainable manufacturing practice
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

19. In 2001, Nike admitted that it used child labor to produce its expensive sportswear products while paying the children just pennies a day. In doing so, Nike _____.
a. deprived some children of the opportunity to have a childhood as in developed economies
b. provided society with opportunities to have a more educated population
c. created new consumers with the ability to purchase products and services
d. showed it was being socially responsible
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

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20. Multinational companies that contract with factories in countries such as Sudan and Pakistan should ensure that _____.
a. children are not employed in these factories
b. cost of production is maintained at low levels using whatever means necessary
c. children do not work more than 70 hours per week
d. children employed in these factories have appropriate safety equipment
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

21. Social sustainability practices of companies _____.
a. are hard to quantify in terms of costs
b. are the same across the globe
c. are usually followed by all companies in different countries
d. are consistently monitored by local governments
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Figure 2.2: Triple Bottom Line
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

22. For those companies that have a single business, _____.
a. there is almost no distinction between a business and a divisional strategy
b. there is no need for a functional strategy
c. strategy and tactics are the same
d. there is no need for outsourcing
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Business-Unit Strategies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

23. In a corporation that has a many businesses, the corporation needs one _____.
a. corporate strategy
b. business strategy
c. functional strategy
d. divisional strategy

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Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Business-Unit Strategies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

24. Core competencies _____.
a. are also known as competitive strengths within a business unit
b. refer to the skills a business needs to acquire
c. are not relevant for a diversified organization
d. can be outsourced
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Business-Unit Strategies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

25. An SBU can achieve synergy by _____.
a. aligning its activities with its functional strategy
b. coordinating and integrating its activities with the corporate strategy of the firm
c. developing new core competencies
d. reducing the extent of outsourcing
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Business-Unit Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

26. The strategy applied in areas such as marketing, operations, finance, and accounting is known as _____.
a. divisional strategy
b. synergistic strategy
c. corporate strategy
d. functional strategy
Ans: D
Cognitive Domain: Knowledge (Remember)

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Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Functional Strategies
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

27. Which of the following is NOT a characteristic of a functional strategy?
a. A functional strategy is developed and implemented at a lower level in the corporate hierarchy.
b. A functional strategy has a shorter time horizon.
c. A functional strategy is more broad and abstract when compared to higher level strategies.
d. A business strategy may have many functional strategies.
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Functional Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

28. McDonald's decision to offer value meals _____.
a. is a classic example of corporate strategy
b. captures the essence of business strategy
c. is an example of a research and development strategy
d. is part of its marketing strategy
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Functional Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

29. A firm's operations strategy _____.
a. guides a firm in using its operational resources effectively to help it achieve a competitive advantage
b. provides a road map for decisions regarding business acquisitions or divestitures that the firm's operations managers make
c. Is directly influenced by a firm's corporate strategy
d. Directly influences a firm's corporate strategy
Ans: A
Cognitive Domain: Analysis (Analyze)

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Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

30. Contingency planning _____.
a. is time-consuming and expensive
b. should be avoided
c. is not essential as it will not be used in most cases
d. all of the these
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Risk Management Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

31. Companies today have to compete across multiple attributes for a firm's core competencies, as a consequence of _____.
a. fewer customer expectations
b. increasing globalization
c. increasing government regulation
d. greater employee expectations
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

32. A firm can improve its operational capabilities by _____.
a. leveraging only its own current resources
b. leveraging the resources of its supply chain partners
c. by focusing only on economic value
d. by focusing only on both social and economic value
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Medium

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33. Which of the following statements is true about the input of operations managers to strategy?
a. Till recently, operations managers had little input into a company's corporate strategy.
b. Till recently, operations managers mostly focused on the company's business strategies.
c. Operations managers are increasingly focused on the company's divisional strategies.
d. Operations managers generally ignore functional strategy.
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

34. Which of the following statements is false with regard to structural decisions?
a. An example of a structural decision is deciding a plant's location.
b. Structural decisions have a long-term impact.
c. Once made, structural decisions can be easily modified.
d. A structural decision is not the concern of corporate strategy.
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

35. Which of the following is NOT one of the critical elements of an operations strategy?
a. customers
b. core competencies
c. critical success factors (CSFs)
d. readily available resources
Ans: D
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Easy

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AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

36. The manufacturing mission depends to a great deal on _____.
a. product factors
b. corporate strategy
c. the board of directors
d. government regulations
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

37. Which of the following terms is incorrectly paired with its description?
a. plan: recognize an opportunity for a financial investment
b. do: test the change by implementing a small-scale pilot study.
c. check: review/analyze test results and identify lessons learned
d. act: take action based on what was learned from the previous step.
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Continuous Service Improvement
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

38. Computers and smartphones have very short product life cycles. This means _____.
a. they need to be replaced only at long intervals
b. for these products, new technology is introduced frequently
c. consumers usually buy only one unit in their lifetimes
d. there are few repeat customers for these products
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

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39. Which of the following statements is true when we consider innovation for products in the context of the product life cycle?
a. Innovation may not be of particularly great importance for mature products.
b. It is too late to improve profitability of mature products through innovation.
c. Innovation is applicable only during the introduction stage of a product's life cycle.
d. Innovation is not required during a product's growth stage.
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

40. Which of the following statements best describes the ultimate goal of operations and supply chain strategies?
a. to produce and deliver products or services to satisfy customers
b. to produce and deliver products or services that delight customers
c. to make sure customers receive defect-free products
d. to make sure profits are maximized
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

41 Customers for a company are _____.
a. the people and groups that consume a firm's products or services
b. the people and groups that supply a firm's products or services
c. the people and groups that finance a firm's products or services
d. the people and groups that produce a firm's products or services
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Customers
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

42. Of the many customers a company may have, it is important that a company identifies those customers who _____.
a. pay for its products

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b. advertise its products
c. are critical for the company's survival
d. are occasional users of the company's products
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Customers
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

43. CSFs _____.
a. refers to critical success factors
b. are usually outsourced
c. are regulated by a government agency
d. do not impact the success of the firm
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

44. A company's core competencies are _____.
a. also known as competitive priorities
b. usually outsourced
c. regulated by the local government
d. required by the ISO
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

45. Which of the following is likely to be a core competency for a company?
a. availability of commodities
b. ability to set up an R&D unit
c. ability to innovate
d. ability to outsource
Ans: C
Cognitive Domain: Analysis (Analyze)

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Learning Objective: 2-2. Define operations strategy, and describe how it is formulated and evaluated.
Answer Location: Formulating and Evaluating Operations Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

46. Which of the following terms is correctly paired with its description?
a. Critical success factors (CSFs): strategic factors that a company requires to compete in a given industry
b. Core competencies: factors that identify the firm as belonging to an industry
c. Business strategy: strategy that governs mergers and acquisitions
d. Corporate strategy: strategy that governs day-to-day operations
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Critical Elements of an Operations Strategy
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

47. A firm can produce at a lower cost than its competitors by _____.
a. achieving economies of scale
b. increasing the cost of raw materials and labor
c. using cheap raw materials and inputs
d. cutting corners in production
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Price
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

48. Which of the following is NOT a common characteristic of product quality?
a. features
b. durability
c. empathy
d. performance
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: 2-3. Contrast the formulation and evaluation of operating strategies for service organization with those for manufacturing organizations.
Answer Location: Core Competencies
Difficulty Level: Medium

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AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

49. Which of the following statements is true with regard to the target market of a product?
a. The mileage a Honda Civic car gets is important to its target market.
b. The mileage a Ferrari car gets is important to its target market.
c. The mileage a Rolls Royce car gets is important to its target market.
d. The mileage a Lamborghini car gets is important to its target market.
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-3. Contrast the formulation and evaluation of operating strategies for service organization with those for manufacturing organizations.
Answer Location: Core Competencies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

50. Which of the following statements (with regard to time) is least likely to be important as a core competency for a company?
a. the time (or duration) for which a customer uses the product
b. the time to develop a product
c. the time to deliver a product
d. the time to receive supplies
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-3. Contrast the formulation and evaluation of operating strategies for service organization with those for manufacturing organizations.
Answer Location: Core Competencies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

51. Product development cycle time is _____.
a. the time it takes to conceptualize, produce, and deliver a product or service
b. the time it takes to receive supplies from the time these are ordered
c. the time it takes to deliver a product or service
d. the time it takes to manufacture a product or service
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Core Competencies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

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52. Getting the products in the hands of the customer by the promised delivery date is the responsibility of _____.
a. the manufacturing firm and the firm's supply chain partners
b. the firm only
c. the firm's supply chain partners only
d. the retailer
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Core Competencies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

53. ERP stands for _____.
a. enterprise resource planning
b. emergency research planning
c. enterprise resource and production
d. emergency resource planning
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Core Competencies
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

54. Product innovation is the development and introduction of a brand-new product or service or the improvement of an existing product or service achieved through _____.
a. design changes
b. increase in time to manufacture
c. increase in time to order supplies
d. increase in time to inspect quality
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Core Competencies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

55. Process innovation _____.

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a. is the development and introduction of a brand-new product or service through changes in product design
b. is the development and introduction of a brand-new product or service through changes in materials and components used in the product
c. refers to the way materials are ordered and delivered to a company
d. refers to the changes in the way in which product is produced or a service is delivered within the firm or across a supply chain.
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Core Competencies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

56. eBay's transformation of e-commerce and online auctions and Amazon enabling the purchase of books online are examples of _____.
a. product innovation
b. process innovation
c. innovation in materials
d. innovation in equipment manufacture
Ans: B
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Core Competencies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

57. Which of the following is an example of an innovation in operations management to gain a competitive edge?
a. the way work is organized
b. hiring capable employees
c. arranging for new sources of finance
d. finding new ways of advertising
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Core Competencies
Difficulty Level: Medium

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58. In the context of operations management, *flexibility* can refer to _____.
a. a firm's ability to produce a range of different products and services
b. a firm's ability to remain unwavering in its commitment to business strategy
c. a firm's ability to remain unwavering in its commitment to functional strategy
d. a firm's ability to remain unwavering in its commitment to corporate strategy
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Core Competencies
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

59. Which of the following statements correctly pairs the term with its description?
a. order winner: competitive criterion that must be present in a product for it to be a viable competitor in the marketplace
b. order qualifier: competitive criterion of a product that causes a customer to choose it instead of a competitor's product
c. order winner: competitive criterion of a product that causes a customer to choose it instead of a competitor's product
d. order winner: competitive criterion of a product that causes a customer to reject it instead of a competitor's product
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Flexibility
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

60. Which of the following statements is true about order winners and order qualifiers?
a. Order winners are more important to a firm than order qualifiers.
b. Order qualifiers are more important to a firm than order winners.
c. Both order winners and order qualifiers are important to a firm.
d. Neither order winners nor order qualifiers are important to a firm.
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.

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Answer Location: Order Winners Versus Order Qualifiers
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

61. In the automobile industry during the late 1980s and early 1990s, the order-winning quality criterion was _____.
a. quality
b. cost
c. volume
d. materials used
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Order Winners Versus Order Qualifiers
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

62. Maintaining the appropriate fit among the four critical elements—customers, product factors, operational CSFs or capabilities, and core competencies—is _____.
a. part of developing and refining an operations strategy
b. a temporary process
c. an annual event
d. the function of corporate strategy
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Order Winners Versus Order Qualifiers
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

63. If a firm's products are no longer properly aligned with changing market trends, the firm can _____.
a. sell its products to customers in another market who do value its products
b. make new investments to upgrade its manufacturing facilities
c. acquire new suppliers
d. reorganize its product distribution processes
Ans: A
Cognitive Domain: Analysis (Analyze)

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Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Maintaining the Fit Among Critical Elements
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

64. Strategic structural decisions are _____.
a. long-term decisions about a firm's capacity and facilities
b. short-term decisions about a firm's processes and technology
c. long-term decisions about a firm's processes and technology
d. short-term decisions about product design
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Strategic Structural and Infrastructural Decisions
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

65. Infrastructural decisions include decisions about _____.
a. the kind of products to offer
b. materials management and control
c. the markets in which to offer products
d. product design
Ans: B
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Strategic Structural and Infrastructural Decisions
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

66. The question *What production planning procedures and decision rules should be in place?* addresses _____.
a. process innovation
b. sales and operations planning
c. control systems
d. product innovation
Ans: B
Cognitive Domain: Application (Apply)

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Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Table 2.2: Infrastructural Decisions in Operations Management
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

67. What makes one company superior to another is the extent to which _____.
a. the company's operations are guided by the firm's infrastructure
b. there is a match between the company's infrastructural and structural decisions and its core competencies
c. the choice of products the firm will manufacture is determined by its capacity to manufacture these products
d. the choice of markets the firm will serve is determined by its capacity to manufacture products for these markets
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Strategic Structural and Infrastructural Decisions
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

68. The performance of an operations strategy is judged by how well _____.
a. it supports the firm's corporate and business strategies
b. it supports the firm's corporate tactics
c. it influences business strategy
d. it influences corporate strategy
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Strategic Structural and Infrastructural Decisions
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

69. The strategic profit model (SPM) _____.
a. is also known as the Monsanto Model
b. provides a visual representation of an organization's financial performance
c. analyzes the firm's operations
d. guides the firm's corporate strategy
Ans: B
Cognitive Domain: Knowledge (Remember)

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Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Strategic Profit Model (SPM)
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

70. According to the SPM, _____.
a. every task performed in every area of a firm has an impact on the firm's bottom line
b. every task performed in every area of a firm has an impact on the firm's product quality
c. every task performed in every area of a firm has an impact on the firm's production capability
d. every task performed in every area of a firm has an impact on the morale of the firm's employees
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Strategic Profit Model (SPM)
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

71. The drawback of the SPM is _____.
a. it is difficult to use
b. considers only operational measures
c. nonfinancial measures are not factored into the model
d. it requires 5 to 10 years of historical data
Ans: C
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Balanced Scorecard
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

72. The balanced scorecard _____.
a. is focused only on financial measures
b. is useful only for manufacturing organizations
c. is used by profit, nonprofit, and governmental organizations worldwide
d. was very popular in the 1940s
Ans: C
Cognitive Domain: Knowledge (Remember)

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Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Balanced Scorecard
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

73. The balanced scorecard _____.
a. provides a framework of performance measurements
b. guides planners on different sources of financing
c. guides planners on product design
d. is very useful for identifying new markets
Ans: C
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Balanced Scorecard
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

74. Which of the following options presents the right sequence of activities in developing a strategic plan for services?
a. First, identify the target market for the firm's services; second, determine the firm's core competency; third, define its mission and its high-level corporate goals and objectives.
b. First, determine the firm's core competency; second, identify the target market for the firm's services; third, define its mission and its high-level corporate goals and objectives.
c. First, define its mission and its high-level corporate goals and objectives; second, determine the firm's core competency; third, identify the target market for the firm's services;
d. First, determine the firm's core competency; second, define its mission and its high-level corporate goals and objectives, third, identify the target market for the firm's service.
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Figure 2.6: Strategic Framework for Service Operations
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

75. Which of the following statements is true with regard to service operations?
a. It encompasses all activities and processes required for implementing the service.

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b. Service operations activities that are not visible to the customer are referred to as front stage activities.
c. Service operations activities that are visible to the customer are referred to as back stage activities.
d. Service operations activities pertaining to the supply chain are referred to as downstream activities.
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: The Service Operations System
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

76. Which of the following is NOT a question which is intended to be answered by service operations strategy?
a. How do we truly create value desired by our customers and stakeholders?
b. What is our rationale for making strategic investments in a particular service?
c. How should service quality be defined and, given differing alternatives, which one should we emphasize to improve the quality of our service?
d. If we have multiple businesses, how do we efficiently allocate resources among them?
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: 2-3. Contrast the formulation and evaluation of operating strategies for service organization with those for manufacturing organizations.
Answer Location: The Service Delivery System
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

77. PDCA stands for _____.
a. Product Development Cycle Analysis
b. Plan, Do, Check, Act
c. Plan, Do, Check, Analyze
d. Please, Do, Check, Answer
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-3. Contrast the formulation and evaluation of operating strategies for service organization with those for manufacturing organizations.
Answer Location: Continuous Service Improvement
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

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78. Productivity is measured by _____.
a. the ratio of goods and services produced to inputs
b. the product of goods produced and inputs used
c. the ratio of inputs to goods and services produced
d. none of these
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Measuring Productivity as Part of Strategic Planning
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

79. Productivity measures include _____.
a. inventory turnover ratios
b. multi-factor productivity measures
c. acid test ratio
d. earnings before interest and tax
Ans: B
Cognitive Domain: Comprehension (Understand)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Measuring Productivity as Part of Strategic Planning
Difficulty Level: Easy
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

80. If we use 2,000 labor hours to produce 400 units of a product, then _____.
a. using the multifactor productivity measure, we get 5 units per labor hour
b. using the single-factor productivity measure, we get 5 units per labor hour
c. using the multifactor productivity measure, we get 1 unit per 5 labor hours
d. using the single-factor productivity measure, we get 1 unit per 5 labor hours
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Measuring Productivity as Part of Strategic Planning
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

81. When calculating multifactor productivity, we need to use _____.
a. a homogenous unit of measurement
b. a heterogeneous unit of measurement
c. a statistical unit of measurement

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d. a multivariate unit of measurement
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Types of Productivity Measures and Their Uses
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

82. Dual sourcing refers to contracting with multiple supply sources _____.
a. as a hedge against price decreases by a supplier
b. as a buffer against disruptions in the supply chain
c. as a way to quickly expand production capacity
d. as a way to give an equal opportunity to different suppliers
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Risk Management Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

83. The productivity index is the ratio of _____.
a. productivity measured in a particular time period to the productivity measured in a base period
b. productivity measured in a particular firm to the productivity measured for firms in that industry
c. productivity measured in a particular country to the productivity measured for firms in other countries
d. productivity measured in one part of the supply chain to the productivity measured in other parts of the supply chain
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Table 2.3: Examples of Various Types of Productivity Measures
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

84. Benchmarking identifies _____.
a. the best practices used by other firms
b. governmental standards that a company must meet

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c. international standards that a company must meet
d. industry standards that a company must meet
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Steps to Improving Productivity
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

85. Productivity is harder to measure in the service sector because _____.
a. inputs are difficult to assess
b. the unit of measurement is not heterogeneous
c. statistical samples are hard to obtain
d. there are no government standards
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-4. Compare the different types of productivity measurements, and explain how firms use them strategically.
Answer Location: Measuring Productivity in the Service Sector
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

86. Supply chain management activities _____.
a. refer to the coordination of activities across multiple firms
b. refer to the application of government standards
c. refer to the application of industry standards
d. refer to the application of international standards
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Formulating and Evaluating Supply Chain Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

87. One way a firm can structure its supply chains is _____.
a. to outsource component manufacturing to third-party contractors
b. to exit the industry
c. to divest the supply chain part of its business
d. to follow international protocols
Ans: A
Cognitive Domain: Application (Apply)

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Learning Objective: 2-5. Describe how both manufacturers and service organizations formulate and evaluate their supply chain strategies.
Answer Location: Formulating and Evaluating Supply Chain Strategies
Difficulty Level: Easy
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

88. To ensure a good fit between the firm's supply chain strategy and the firm's overall corporate strategy, the firm needs to _____.
a. know their customers and the uncertainties associated with their supply chains
b. know the rules of international trade
c. ensure compliance with ISO regulations
d. ensure compliance with local government regulations
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-1. Compare the different levels of strategic planning, and identify the performance measures in each.
Answer Location: Formulating Supply Chain Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

89. Key performance indicators to monitor how well a firm's supply chain is working include _____.
a. inventory turns
b. return on investment
c. return on assets
d. earnings before interest, taxes, and depreciation
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Evaluating the Performance of a Supply Chain Strategy
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

90. Which of the following correctly pairs the short form with its full form?
a. DPMO: defectives per million opportunities
b. SCOR: supply chain operations reference
c. PDCA: prepare-direct-consolidate-act
d. SPM: structured process management
Ans: B
Cognitive Domain: Knowledge (Remember)

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Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Evaluating the Performance of a Supply Chain Strategy
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

91. Which of the following is NOT one of the processes in the SCOR model?
a. Design: the product's features and attributes
b. Plan: develop a supply chain that best meets sourcing, production, and delivery processes
c. Source: procure goods and services to meet demand
d. Make: transform product into finished state
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Evaluating the Performance of a Supply Chain Strategy
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

92. Offshoring of manufacturing to countries such as Brazil and Vietnam has been encouraged by _____.
a. the need for sustainable manufacturing practices
b. the higher transportation costs
c. need for lower manufacturing costs
d. the longer shipping times
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Integrating Operations and Supply Chain Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

93. Companies successful in integrating their operations and supply chains globally possess which of the following capabilities?
a. supply chain adaptability
b. ability to divest a business
c. ability to follow the dictates of corporate strategy
d. strict adherence to ISO requirements
Ans: A

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Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Integrating Operations and Supply Chain Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

94. In 2011, an earthquake and subsequent tsunami shut down the Fukushima Dai-ichi nuclear power plant in Fukushima, Japan, for months. This is an example of _____.
a. an unforeseen event that can disrupt operational and supply chain activities
b. the success of contingency planning
c. the quick response by the Japanese government in rescue operations
d. the need for ISO intervention
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Risk Management Strategies
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

95. A firm's operations should have a risk management program that can anticipate _____.
a. uncontrollable events
b. the need to divest the business
c. how employees can be redeployed from a business in distress
d. the need to redeploy its resources
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Risk Management Strategies
Difficulty Level: Hard
AACSB: Analytical thinking (able to analyze and frame problems)

96. The balanced scorecard _____.
a. was introduced by the ISO
b. was popular in the 1970s
c. can be used to improve the firm's internal communications
d. is required by the U.S. government
Ans: C
Cognitive Domain: Analysis (Analyze)

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Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Balanced Scorecard
Difficulty Level: Easy
AACSB: Analytical thinking (able to analyze and frame problems)

97. Corporate strategy is a strategy that _____.
a. attempts to address the fundamental question of what industries and markets the organization should enter and compete in
b. attempts to address the fundamental question of how a company can compete in a particular industry
c. attempts to address the fundamental question of how to position a company in a given market
d. attempts to address the fundamental question of what advertising strategy to follow
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Corporate Strategy
Difficulty Level: Easy
AACSB: Analytical thinking (able to analyze and frame problems)

98. Business strategy is a strategy that _____.
a. attempts to address the fundamental question of what industries and markets in which the organization should enter and compete
b. attempts to address the fundamental question of how a company can compete in a particular industry
c. attempts to address the fundamental question of how to improve the company's operations
d. attempts to address the fundamental question of what advertising strategy to follow
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Business-Unit Strategies
Difficulty Level: Easy
AACSB: Analytical thinking (able to analyze and frame problems)

99. Functional strategy is a strategy that _____.
a. attempts to address the fundamental question of what industries and markets the organization should enter and compete in
b. attempts to address the fundamental question of how a company can compete in a particular industry

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c. attempts to address the fundamental question of how to manage a particular function
d. attempts to address the fundamental question of what advertising strategy to follow
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Functional Strategies
Difficulty Level: Easy
AACSB: Analytical thinking (able to analyze and frame problems)

100. An order loser is _____.
a. a company salesman who fails to procure an order for the company's products
b. a qualifying criterion a firm fails to meet
c. an administrative person who lost an order received by the company
d. an accounting practice the company failed to follow
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: 2-6. Identify the key capabilities firms need to formulate and implement global operations and supply chain strategies and manage the risks related to them.
Answer Location: Order Winners Versus Order Qualifiers
Difficulty Level: Easy
AACSB: Analytical thinking (able to analyze and frame problems)

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**Module B: The Transportation Models**
**Test Bank**

**Multiple Choice**

1. Which of the following is a special case of linear programming problems in which the objective is to minimize the total cost of transporting goods from the various supply origins to the different demand destinations?
a. transportation model
b. Simplex LP
c. iso-profit line method
d. corner point solution method
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Easy
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

2. To solve a transportation model, we should first set up the problem as a _____.
a. transportation objective
b. transportation matrix
c. transportation product mix
d. northwest corner rule
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

3. Once an initial solution is established in a transportation model problem, we will use the _____ method to progress from the initial feasible solution to an optimal solution.
a. matrix least cost
b. matrix maximum profit
c. northwest corner
d. stepping stone
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem

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Difficulty Level: Medium
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4. Which of the following is one of the methods to establish an initial feasible solution in a transportation model problem?
a. matrix maximum profit method
b. stepping stone method
c. matrix least cost method
d. transportation matrix method
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

5. Which of the following methods involves first allocating shipping units to the northwest (top left-hand) corner of the transportation matrix and then proceeding systematically by making allocations of shipping units to cells along either a row or column until the bottom right-hand corner of the matrix is reached?
a. matrix least cost method
b. matrix maximum profit method
c. northwest corner rule
d. stepping stone method
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

6. With the _____ method, an initial feasible solution to the transportation problem is obtained by allocating shipments beginning with the route that has the lowest cost of transportation.
a. matrix least cost method
b. matrix maximum profit method
c. northwest corner rule
d. stepping stone method
Ans: A
Cognitive Domain: Application (Apply)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

7. Which of the following is an iterative process that will enable us to move from an initial feasible solution to finding an optimal solution to the transportation problem?
a. matrix least cost method
b. matrix maximum profit method
c. northwest corner rule
d. stepping stone method
Ans: D
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

8. _____ refer to the occupied cells in the initial solution of the transportation matrix, which are used in arriving at an improved solution.
a. Stepping stones
b. Reference cells
c. Variable cells
d. Improvement matrix methods
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Easy
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

9. Which of the following statements is FALSE about methods involved in solving a transportation problem?
a. Matrix least cost method reduces the number of computations and the time required to determine the optimal solution.
b. Northwest corner rule is intuitively more appealing and has better rationale than the matrix least cost method.
c. Northwest corner rule begins at the top left-hand corner of the matrix and allocates units until either the supply is exhausted or demand is met.

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d. Matrix least cost method begins with the cell that has the lowest per unit cost and allocates units until either the supply is exhausted or demand is met.
Ans: B
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Easy
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

10. To find the optimal solution using the stepping stone method, first select a(n) _____ in the initial basic feasible solution to be evaluated.
a. occupied cell
b. empty cell
c. referenced cell
d. variable cell
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

11. Which of the following statements is FALSE about the stepping stone method?
a. A closed path is drawn, using only horizontal and vertical moves.
b. Turning corners should occur only on occupied cells.
c. Stepping over any occupied or unoccupied cell is not allowed.
d. If the improvement indices have values greater than or equal to zero, then the current solution is optimal.
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Hard
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

12. In the stepping stone method, when the value is obtained by summing up the unit costs in the cells with a plus sign, and then from the resulting total, subtracting the sum obtained by adding the unit costs in cells containing a minus sign, it is called _____.
a. improvement index
b. performance index

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c. evaluation index
d. selection index
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Hard
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

13. In the stepping stone model, a nondegenerate optimum solution obtained should satisfy _____ conditions.
a. two
b. three
c. four
d. five
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Hard
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

14. Which of the following is one of the conditions that a nondegenerate optimum solution obtained in the stepping stone method should satisfy?
a. The number of cells with positive allocations should be less than the number of rows plus the number of columns in the transportation matrix.
b. The number of cells with positive allocations should be greater than the number of rows minus the number of columns in the transportation matrix.
c. The number of cells with positive allocations should be equal to the number of rows plus the number of columns in the transportation matrix minus one.
d. The number of cells with positive allocations should be equal to the number of rows plus the number of columns in the transportation matrix.
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
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15. Which of the following is a FALSE assumption about the transportation model?

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a. Capacity at each supply location or origin is limited.
b. Demand requirements at each destination are known.
c. Regardless of their origin or destination, the items shipped are homogenous.
d. Between each origin and destination, there are multiple routes used.
Ans: D
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

16. A transportation problem in which the number of units demanded is equal to the total number of supply units available is called _____.
a. balanced transportation problem
b. unbalanced transportation problem
c. improved transportation problem
d. feasible transportation problem
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

17. A transportation problem in which the total number of supply units available is greater than the demand requirements or vice versa is called _____.
a. balanced transportation problem
b. unbalanced transportation problem
c. improved transportation problem
d. feasible transportation problem
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

18. A fictitious demand destination created to arrive at a balanced transportation problem (i.e., total demand = total supply) is called _____.
a. dummy supply destination

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b. dummy demand destination
c. dummy supply source
d. fictitious demand destination
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Additional Issues in Transportation Modeling
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

19. A fictitious supply source created to arrive at a balanced transportation problem (i.e., total demand = total supply) is called _____.
a. dummy supply destination
b. dummy demand destination
c. dummy supply source
d. fictitious supply source
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Additional Issues in Transportation Modeling
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

20. A condition that occurs when the solution to a transportation problem has occupied routes(cells) that are less than (number of origins + the number of destinations –1) is called _____.
a. degeneracy
b. nondegeneracy
c. optimality
d. feasibility
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Additional Issues in Transportation Modeling
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

21. To overcome the problem of degeneracy, it is required to create a(n) _____.
a. artificially occupied cell
b. occupied cell
c. unoccupied cell
d. empty cell

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Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Additional Issues in Transportation Modeling
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

22. Consider the transportation matrix that follows. The transportation problem can be labeled as a(n) _____ transportation problem.

| To / From | Los Angeles | Cleveland | Chicago | Production Capacity |
|---|---|---|---|---|
| Denver | $4 | $3 | $2 | 2000 |
| Milwaukee | $7 | $3 | $2 | 2000 |
| Columbia | $8 | $6 | $4 | 2000 |
| Demand Requirement | 2000 | 3000 | 1000 | 6000 |

a. balanced
b. unbalanced
c. partly occupied
d. artificially occupied
Ans: A
Cognitive Domain: Comprehension (Understand)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

23. XYZ has three supply chain locations with respective production capacities of an electronic component (Denver, Milwaukee, and Columbia) and three demand locations with their respective demand requirements for that electronic component. The demand requirements, production capacities, and the per-unit transportation costs are tabled in the transportation matrix shown here. Determine the initial shipping cost using the northwest corner rule.

| ***To*** / **From** | ***Los Angeles*** | ***Cleveland*** | ***Chicago*** | ***Production Capacity*** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **Denver** | $4 | $3 | $2 | 2,000 |
| **Milwaukee** | $7 | $3 | $2 | 2,000 |
| **Columbia** | $8 | $6 | $4 | 2,000 |
| **Demand requirement** | 2,000 | 3,000 | 1,000 | 6,000 |

a. $30,000
b. $40,000
c. $24,000
d. $34,000
Ans: C
Cognitive Domain: Application (Apply)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

24. XYZ has three supply chain locations with respective production capacities of an electronic component (Denver, Milwaukee, and Columbia) and three demand locations with their respective demand requirements for that electronic component. The demand requirements, production capacities, and the per-unit transportation costs are tabled in the transportation matrix shown here. Determine the initial shipping cost using the matrix least cost method.

| ***To*** / **From** | ***Los Angeles*** | ***Cleveland*** | ***Chicago*** | ***Production Capacity*** |
|---|---|---|---|---|
| **Denver** | $4 | $3 | $2 | 2,000 |
| **Milwaukee** | $7 | $3 | $2 | 3,000 |
| **Columbia** | $8 | $6 | $4 | 2,000 |
| **Demand requirement** | 3,000 | 3,000 | 1,000 | 7,000 |

a. $30,000
b. $40,000
c. $24,000
d. $31,000
Ans: D

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Cognitive Domain: Application (Apply)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

25. While using the stepping stone method, if the improvement indices for all unoccupied cells are positive, then the improved solution is _____.
a. optimal
b. feasible
c. erroneous
d. nondegenerate
Ans: A
Cognitive Domain: Application (Apply)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

26. Which of the following is true about the northwest corner rule?
a. It generates neither feasible solutions nor optimum least-cost solutions.
b. It generates both feasible solutions and optimum least-cost solutions.
c. It generates feasible solutions but not necessarily optimum least-cost solutions.
d. It generates optimum least-cost solutions but not necessarily feasible solutions.
Ans: C
Cognitive Domain: Comprehension (Understand)
Learning Objective: B-2. Apply transportation modeling to other situations.
Answer Location: Formulating and Solving the Transportation Problem
Difficulty Level: Medium
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

27. If, in a transportation problem, the total number of units demanded is equal to the total number of supply units available, the transportation problem is then described as _____.
a. balanced
b. degenerate
c. unbalanced
d. feasible
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms

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28. _____ refers to a condition that occurs when the solution to a transportation problem has occupied routes (cells) that are less than the (number of origins + the number of destinations – 1).
a. Balanced transportation problem
b. Degeneracy
c. Dummy demand destinations
d. Dummy supply sources
Ans: B
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

29. _____ refers to a fictitious demand destination created to arrive at a balanced transportation problem (i.e., total demand = total supply).
a. Balanced transportation problem
b. Degeneracy
c. Dummy demand destinations
d. Dummy supply sources
Ans: C
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

30. _____ refers to a fictitious supply source created to arrive at a balanced transportation problem (i.e., total demand = total supply).
a. Balanced transportation problem
b. Degeneracy
c. Dummy demand destinations
d. Dummy supply sources
Ans: D
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms

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31. The _____ is a special case of linear programming problems in which the objective is to minimize the total cost of transporting goods from the various supply origins to the different demand destinations.
a. transportation model
b. integer programming
c. warehousing problem
d. workforce scheduling model
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

32. _____ refers to a problem in which the total number of supply units available is greater than the demand requirements, or vice versa.
a. An unbalanced transportation problem
b. An integer programming problem
c. A warehousing problem
d. A network problem
Ans: A
Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

33. We can use the matrix least cost method to solve transportation problems. In this method, an initial feasible solution to the transportation problem is obtained by _____.
a. allocating shipments ending with the route that has the lowest unit cost of transportation
b. allocating shipments beginning with the route that has the lowest unit cost of transportation
c. allocating shipments beginning with the route that has the highest unit cost of transportation
d. allocating shipments ending with the route that has the highest unit cost of transportation
Ans: B

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Cognitive Domain: Knowledge (Remember)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

34. The matrix least cost method to solve transportation problems has several advantages. Which of the following is NOT one of them?
a. The matrix least cost method has better rationale than the northwest corner rule.
b. The matrix least cost method is less appealing than the northwest corner method.
c. The matrix least cost method reduces the number of computations required to determine the optimal solution.
d. The matrix least cost method reduces the time required to determine the optimal solution.
Ans: B
Cognitive Domain: Comprehension (Understand)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Key Terms
Difficulty Level: Medium
AACSB: Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

*Shipping Costs for ACME Widgets, Inc.*

| | | *Markets* | | | |
|---|---|---|---|---|---|
| | From \ To | Huntsville | Visalia | Dayton | Production Capacity |
| Plants | Montgomery | $1 | $2 | $3 | 5,500 |
| | Riverside | $4 | $5 | $6 | 6,500 |
| | Bryan | $7 | $8 | $9 | 2,000 |
| | Demand requirement | 5,000 | 6,000 | 3,000 | |

35. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total shipment of widgets from Bryan to Dayton is _____.
a. 2,000
b. 3,500
c. 4,500
d. 3,000

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Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

36. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the shipment of widgets from Riverside to Huntsville is _____.
a. 2,500
b. 4,200
c. 4,500
d. 5,000
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

37. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total production at Montgomery is _____.
a. 2,500
b. 3,500
c. 4,500
d. 5,500
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

38. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be

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set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the shipment from Montgomery to Huntsville is _____.
a. 0
b. 3,500
c. 4,500
d. 5,500
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

39. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the highest transportation costs are from _____.
a. Riverside to Visalia
b. Bryan to Dayton
c. Montgomery to Visalia
d. Riverside to Huntsville
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

40. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total transportation costs are _____.
a. $57,500
b. $35,000
c. $48,900
d. $68,125
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium

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AACSB: Analytical thinking (able to analyze and frame problems)

41. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the lowest non-zero quantity shipped is from _____.
a. Montgomery to Visalia
b. Riverside to Visalia
c. Montgomery to Dayton
d. Bryan to Huntsville
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

42. Refer to the data given in the table for Acme Widgets, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal to (=) sign in the Excel Solver dialogue.) At the optimum solution, the lowest non-zero transportation costs are from _____.
a. Montgomery to Visalia
b. Riverside to Visalia
c. Montgomery to Dayton
d. Bryan to Huntsville
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

*Production + Shipping Costs for Auto Parts, Inc.*

| | | *Markets* | | | |
|---|---|---|---|---|---|
| | To / From | Paris | Amsterdam | Naples | Production Capacity |
| Plants | Bangkok | $38.04 | $65.52 | $24.60 | 3,500 |
| | Tokyo | $42.14 | $42.67 | $52.16 | 7,200 |
| | Kolkata | $77.31 | $29.80 | $23.40 | 1,800 |
| | Demand requirement | 3,800 | 2,900 | 5,800 | 12,500 |

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43. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the lowest non-zero costs are from _____.
a. Tokyo to Naples
b. Tokyo to Paris
c. Kolkata to Naples
d. Bangkok to Naples
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

44. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total costs are _____.
a. $283,475
b. $438,175
c. $356,787
d. $523,412
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

45. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the costs for production and shipping from Kolkata to Naples is _____.
a. $42,120
b. $26,080
c. $123,743
d. $160,132

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Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

46. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the costs for production and shipping from Tokyo to Naples is _____.
a. $42,120
b. $26,080
c. $123,743
d. $160,132
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

47. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the costs for production and shipping from Tokyo to Amsterdam is _____.
a. $42,120
b. $26,080
c. $123,743
d. $160,132
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

48. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced

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transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the costs for production and shipping from Bangkok to Naples are _____.
a. $42,120
b. $86,100
c. $123,743
d. $160,132
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

49. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, demand in which market can be met only by producing in all three production areas?
a. Naples
b. Paris
c. Amsterdam
d. both Naples and Paris
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

50. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the production area is shipping to all three markets?
a. Bangkok
b. Kolkata
c. Tokyo
d. none of these
Ans: C
Cognitive Domain: Analysis (Analyze)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

51. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Tokyo to Naples is _____.
a. 500
b. 1,200
c. 3,500
d. 4,850
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

52. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Tokyo to all three markets is _____.
a. 7,200
b. 4,850
c. 3,500
d. 2,475
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

53. Refer to the data given for production and shipping costs for Auto Parts, Inc. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?

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a. The number of units shipped from Kolkata to Naples is one fourth of the total quantity produced by Tokyo.
b. The Naples market requires more than can be produced by Tokyo alone.
c. The quantity shipped from Tokyo to Naples is equal to the quantity shipped from Bangkok to Naples.
d. The cost of producing/shipping from Tokyo to Naples is more than the cost of producing/shipping from Kolkata to Naples.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

*Shipping Costs for The Terra Cotta Company*

| | | *Markets* | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Kalamazoo | Lakeland | Madison | Navarre | Sacramento | Winston | *Productio Capacity* |
| Plants | Aberdeen | $3.38 | $3.39 | $3.30 | $3.12 | $3.47 | $3.60 | 6,400 |
| | Birmingham | $3.25 | $3.45 | $3.10 | $3.20 | $3.62 | $3.33 | 6,100 |
| | Brighton | $3.37 | $3.92 | $3.19 | $3.01 | $3.36 | $3.78 | 7,200 |
| | Cairo | $3.02 | $3.18 | $3.07 | $3.57 | $2.79 | $3.65 | 8,900 |
| | Danbury | $3.11 | $2.91 | $3.42 | $3.34 | $3.12 | $3.04 | 8,000 |
| | Escondido | $3.03 | $3.59 | $3.20 | $3.45 | $3.10 | $3.09 | 7,000 |
| | Fairview | $3.32 | $3.15 | $3.27 | $2.90 | $2.93 | $2.87 | 6,400 |
| | Demand | 8,300 | 8,500 | 9,100 | 7,700 | 6,600 | 9,800 | |

54. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Aberdeen to Kalamazoo are $8,112.
b. The shipping costs from Aberdeen to Kalamazoo are $1,695.
c. The shipping costs from Danbury to Navarre are $6,946.
d. The shipping costs from Danbury to Navarre are $10,908.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

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55. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Aberdeen to Kalamazoo are $10,920.
b. The shipping costs from Aberdeen to Kalamazoo are $1,695.
c. The shipping costs from Escondido to Winston are $10,506.
d. The shipping costs from Danbury to Navarre are $10,908.
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

56. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Aberdeen to Kalamazoo are $10,920.
b. The shipping costs from Cairo to Kalamazoo are $6,946.
c. The shipping costs from Escondido to Winston are $10,606.
d. The shipping costs from Danbury to Navarre are $10,908.
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

57. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Aberdeen to Kalamazoo are $5,920.
b. The shipping costs from Cairo to Kalamazoo are $5,920.
c. The shipping costs from Aberdeen to Navarre are $1,560.
d. The shipping costs from Danbury to Navarre are $1,560.
Ans: C
Cognitive Domain: Analysis (Analyze)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

58. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Danbury to Lakeland are $10,908.
b. The shipping costs from Aberdeen to Lakeland are $1,695.
c. The shipping costs from Aberdeen to Madison are $18,414.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

59. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Escondido to Kalamazoo are $10,908.
b. The shipping costs from Aberdeen to Lakeland are $1,685.
c. The shipping costs from Aberdeen to Madison are $18,414.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

60. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Danbury to Lakeland are $23,280.

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b. The shipping costs from Aberdeen to Lakeland are $1,795.
c. The shipping costs from Aberdeen to Madison are $18,414.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

61. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Danbury to Lakeland are $2,418.
b. The shipping costs from Aberdeen to Lakeland are $1,795.
c. The shipping costs from Birmingham to Madison are $18,910.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

62. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Danbury to Lakeland are $2,418.
b. The shipping costs from Aberdeen to Lakeland are $1,795.
c. The shipping costs from Brighton to Madison are $0.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013.)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

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63. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Brighton to Navarre are $21,672.
b. The shipping costs from Cairo to Navarre are $5,580.
c. The shipping costs from Cairo to Sacramento are $9,570.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

64. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Brighton to Navarre are $12,462.
b. The shipping costs from Cairo to Navarre are $5,580.
c. The shipping costs from Cairo to Sacramento are $18,414.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

65. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping costs from Brighton to Navarre are $12,462.
b. The shipping costs from Fairview to Winston are $18,368.
c. The shipping costs from Cairo to Sacramento are $2,244.
d. The shipping costs from Fairview to Madison are $18,414.
Ans: B
Cognitive Domain: Analysis (Analyze)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

66. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping cost from all plants to Kalamazoo is $25,966.
b. The shipping cost from all plants to Lakeland is $17,000.
c. The shipping cost from all plants to Madison is $23,225.
d. The shipping cost from all plants to Winston is $21,123.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

67. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping cost from all plants to Kalamazoo is $15,656.
b. The shipping cost from all plants to Lakeland is $24,975.
c. The shipping cost from all plants to Madison is $23,225.
d. The shipping cost from all plants to Winston is $21,123.
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

68. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping cost from all plants to Kalamazoo is $15,656.

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b. The shipping cost from all plants to Lakeland is $14,280.
c. The shipping cost from all plants to Madison is $28,810.
d. The shipping cost from all plants to Winston is $21,123.
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

69. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The shipping cost from all plants to Kalamazoo is $15,656.
b. The shipping cost from all plants to Lakeland is $14,280.
c. The shipping cost from all plants to Madison is $18,345.
d. The shipping cost from all plants to Winston is $28,874.
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

70. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The lowest non-zero shipment is from Aberdeen to Lakeland.
b. The lowest non-zero shipment is from Birmingham to Kalamazoo.
c. The lowest non-zero shipment is from Cairo to Winston.
d. The lowest non-zero shipment is from Fairview to Navarre.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

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71. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The quantity shipped from Danbury to Navarre is more than the quantity shipped from Cairo to Kalamazoo.
b. The quantity shipped from Escondido to Kalamazoo is more than the quantity shipped from Cairo to Kalamazoo.
c. The quantity shipped from Birmingham to Madison is less than the quantity shipped from Brighton to Madison.
d. The quantity shipped from Escondido to Winston is less than the quantity shipped from Danbury to Sacramento.
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

72. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, which of the following statements is true?
a. The quantity shipped from Birmingham to Madison is more than double the quantity shipped from Brighton to Madison.
b. The quantity shipped from Danbury to Navarre is more than the quantity shipped from Cairo to Kalamazoo.
c. The quantity shipped from Birmingham to Madison is less than the quantity shipped from Brighton to Madison.
d. The quantity shipped from Escondido to Winston is less than the quantity shipped from Danbury to Sacramento.
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

73. Refer to the shipping costs for The Terra Cotta Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be

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set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total shipping costs are approximately _____.
a. $150,000
b. $950,000
c. $215,000
d. $425,000
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

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| | | *Shipping Costs (per unit) for The Allied Motors Company* | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | *Markets* | | | | | | *Production Capacity (units)* |
| | | Mobile | Newark | Norfolk | Richmond | Saginaw | Shreveport | |
| Plants | Bloomington | $2.45 | $5.59 | $5.21 | $3.93 | $0.35 | $0.33 | 627 |
| | Chattanooga | $5.05 | $2.88 | $2.69 | $2.62 | $2.82 | $1.05 | 462 |
| | Downey | $3.05 | $2.47 | $1.54 | $1.82 | $1.45 | $0.49 | 787 |
| | Green Bay | $3.99 | $3.09 | $4.76 | $0.46 | $1.26 | $0.22 | 586 |
| | Hampton | $3.60 | $0.19 | $0.11 | $0.10 | $1.42 | $2.66 | 591 |
| | Knoxville | $1.02 | $1.31 | $2.64 | $0.86 | $4.15 | $0.92 | 592 |
| | Lowell | $2.86 | $4.62 | $1.62 | $1.48 | $5.44 | $2.13 | 855 |
| | Demand | 870 | 791 | 337 | 895 | 818 | 789 | |

74. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total shipping costs are approximately:
a. $2,321
b. $4,384
c. $3,310
d. $5,921
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

75. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the highest shipping costs are from _____.
a. Lowell to Shreveport
b. Lowell to Norfolk
c. Lowell to Mobile
d. Lowell to Richmond
Ans: C
Cognitive Domain: Analysis (Analyze)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

76. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the lowest non-zero shipping costs are from _____.
a. Downey to Norfolk
b. Knoxville to Mobile
c. Bloomington to Norfolk
d. Chattanooga to Saginaw
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

77. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Knoxville to Mobile is _____.
a. 592
b. 617
c. 243
d. 433
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

78. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Downey to Norfolk is _____.
a. 69

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b. 617
c. 243
d. 433
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

79. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Downey to Saginaw is _____.
a. 191
b. 617
c. 243
d. 433
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

80. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Downey to Shreveport is _____.
a. 527
b. 617
c. 243
d. 433
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
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81. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Hampton to Newark is _____.
a. 527
b. 591
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

82. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Chattanooga to Newark is _____.
a. 527
b. 200
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

83. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Green Bay to Richmond is _____.
a. 527
b. 586
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)

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Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

84. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Lowell to Mobile is _____.
a. 527
b. 278
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

85. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Lowell to Norfolk is _____.
a. 527
b. 268
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

86. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Lowell to Richmond is _____.
a. 527

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b. 309
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

87. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Chattanooga to Shreveport is _____.
a. 527
b. 262
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

88. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the number of units shipped from Bloomington to Saginaw is _____.
a. 527
b. 627
c. 243
d. 433
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
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89. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Lowell to all markets is approximately _____.
a. $1,399
b. $1,687
c. $969
d. $1,833
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

90. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Knoxville to all markets is approximately _____.
a. $604
b. $687
c. $969
d. $833
Ans: A
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

91. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Lowell to Mobile is approximately _____.
a. $604
b. $795
c. $969
d. $833
Ans: B

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Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

92. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Hampton to Newark is approximately _____.
a. $604
b. $795
c. $112
d. $833
Ans: C
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

93. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Chattanooga to Newark is approximately _____.
a. $893
b. $432
c. $672
d. $576
Ans: D
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

94. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision

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variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total cost of shipping from all plants to Newark is _____.
a. $893
b. $688
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

95. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Green Bay to Richmond is _____.
a. $893
b. $270
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

96. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Lowell to Norfolk is _____.
a. $893
b. $434
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium

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AACSB: Analytical thinking (able to analyze and frame problems)

97. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the cost of shipping from Lowell to Richmond is _____.
a. $893
b. $457
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

98. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total cost of shipping from all plants to Saginaw is _____.
a. $893
b. $496
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

99. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total cost of shipping from all plants to Shreveport is _____.
a. $893
b. $533
c. $672
d. $576
Ans: B

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Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

100. Refer to the Shipping Costs for The Allied Motors Company. Solve the transportation problem using Excel Solver. (Remember that in balanced transportation problems all constraints—except the non-negativity constraints of the decision variables—should be set as an equal-to (=) sign in the Excel Solver dialogue.) At the optimum solution, the total cost of shipping from Chattanooga to all markets is _____.
a. $893
b. $851
c. $672
d. $576
Ans: B
Cognitive Domain: Analysis (Analyze)
Learning Objective: B-1. Formulate and solve the transportation problems using both manual methods and the Excel Solver, and interpret the solutions.
Answer Location: Solving Transportation Problems Using Excel (Version 2013)
Difficulty Level: Medium
AACSB: Analytical thinking (able to analyze and frame problems)

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