Operations Management 14th edition Heizer Test Bank

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Operations Management, 14e **(Heizer/Render/Munson)**
Chapter 1 Operations and Productivity

Section 1 What Is Operations Management?

1) Some of the operations-related activities of Hard Rock Café include designing music instruments and analyzing them for cost and labor requirements.
Answer: FALSE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) Because Hard Rock Cafés are themed restaurants, operations managers focus their layout design efforts on attractiveness while paying little attention to efficiency.
Answer: FALSE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) All organizations, including service firms such as banks and hospitals, have a production function.
Answer: TRUE
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Operations management is the set of activities that creates value in the form of tangible goods, and intangible outputs like services, by transforming inputs into outputs.
Answer: TRUE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) Production is the creation of goods and services.
Answer: TRUE
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) At Hard Rock Café, tasks that reflect operations or operations management include:
A) designing efficient layouts.
B) providing meals.
C) receiving ingredients.
D) preparing effective employee schedules.
E) all of these.
Answer: E
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) An operations task performed at Hard Rock Café is:
A) borrowing funds to build a new restaurant.
B) advertising changes in the restaurant menu.
C) designing efficient kitchen layouts.
D) managing the payroll for employees.
E) overseeing financial reports.
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

8) Operations management is applicable:
A) mostly to the service sector.
B) to services exclusively.
C) mostly to the manufacturing sector.
D) to all firms, whether manufacturing or service.
E) to the manufacturing sector exclusively.
Answer: D
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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9) _____ is the set of activities that creates value in the form of goods and services by transforming inputs into outputs.
Answer: Operations management
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

10) Operations management is the set of activities that creates value in the form of goods and services by transforming _____ into _____.
Answer: inputs; outputs
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

11) Identify three or more operations-related tasks carried out by Hard Rock Café.
Answer: Providing custom meals; designing, testing, and costing meals; acquiring, receiving, and storing supplies; recruiting and training employees; preparing employee schedules; designing efficient restaurant layouts.
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Integration of real-world business experiences
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

12) Define operations management. Will your definition accommodate both manufacturing and service operations?
Answer: Operations management can be defined as the management of all activities directly related to the creation of goods and/or services through the transformation of inputs into outputs. Yes.
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 2 Organizing to Produce Goods and Services

1) Which of the following are the primary functions of all organizations?
A) production/operations, marketing, and human resources
B) marketing, human resources, and finance/accounting
C) sales, quality control, and production/operations
D) marketing, production/operations, and finance/accounting
E) research and development, finance/accounting, and purchasing
Answer: D
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) Which of the following tasks within a manufacturing firm is performed by the operations function?
A) market research
B) borrowing funds
C) sales promotion
D) stock issue
E) quality assurance and control
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Which of the following would NOT be an operations function in a commercial bank?
A) auditing
B) teller scheduling
C) maintenance
D) collection
E) check clearing
Answer: A
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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4) The marketing function is concerned with:
A) producing goods or providing services.
B) procuring materials, supplies, and equipment.
C) building and maintaining a positive image.
D) generating the demand for the organization's products or services.
E) securing monetary resources.
Answer: D
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

5) The purchasing function is concerned with:
A) producing goods or providing services.
B) procuring materials, supplies, and equipment.
C) building and maintaining a positive image.
D) generating the demand for the organization's products or services.
E) securing monetary resources.
Answer: B
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) The finance function is concerned with:
A) producing goods or providing services.
B) procuring materials, supplies, and equipment.
C) building and maintaining a positive image.
D) generating the demand for the organization's products or services.
E) securing monetary resources.
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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7) Which of the following tasks within an airline company is related to operations?
A) crew scheduling
B) international monetary exchange
C) sales
D) advertising
E) accounts payable
Answer: A
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

8) For a commercial bank, the operations function will involve:
A) teller scheduling.
B) advertising new loan products.
C) auditing financial transactions.
D) accounting expenses incurred.
E) accounts payable.
Answer: A
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

9) For an airline, the marketing function will involve:
A) crew scheduling.
B) managing general ledger.
C) cash control.
D) pricing tickets.
E) dispatching crew.
Answer: D
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

10) Marketing, _____, and finance/accounting are the three functions that all organizations must perform to create goods and services.
Answer: production/operations
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 3 The Supply Chain

1) Competition in the 21st century is no longer between companies; it is between *supply chains*.
Answer: TRUE
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) A supplier of wood for a paper manufacturing company would be considered as part of that company's supply chain.
Answer: TRUE
Diff: 2
AACSB: Reflective thinking
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

3) What is a global network of organizations and activities that supply a firm with goods and services?
A) supply tree
B) provider network
C) supply chain
D) vendor network
E) vendor tree
Answer: C
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

4) Which of the following fosters specialization and worldwide supply chains?
A) more expensive transportation
B) instant communication
C) economies of scope
D) managers with a broad knowledge of many things
E) high trade tariffs
Answer: B
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

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5) A(n) _____ is a global network of organizations and activities that supply a firm with goods and services.
Answer: supply chain
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

6) Competition in the 21st century is no longer between companies; it is between _____.
Answer: supply chains
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

7) Identify up to four phenomena that foster specialization and worldwide supply chains.
Answer: (1) a more technologically oriented society, (2) specialized expert knowledge, (3) instant communication, and (4) cheaper transportation
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Compare and contrast different sourcing strategies including outsourcing and insourcing

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Section 4 Why Study OM?

1) One reason to study operations management is to learn how goods and services are consumed.
Answer: FALSE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) One reason to study operations management is to learn how goods and services are produced.
Answer: TRUE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Reasons to study operations management include:
A) studying how people organize themselves for productive enterprise.
B) knowing how goods and services are consumed.
C) understanding what human resource managers do.
D) learning about a costly part of the enterprise.
E) A and D
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Reasons to study operations management include learning about:
A) how people organize themselves for productive enterprise.
B) how goods and services are produced.
C) what operations managers do.
D) a costly part of the enterprise.
E) all of these.
Answer: E
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) Brandon Production is a small firm focused on the assembly and sale of custom computers. The firm is facing stiff competition from low-priced alternatives, and is looking at various solutions to remain competitive and profitable. Current financials for the firm are shown in the table below. In the first option, marketing will increase sales (and both cost of inputs and production costs) by 50%. The next option is Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs. Finally, there is an OM option, which would reduce production costs by 25%. Which of the options would you recommend to the firm if it can only pursue one option? In addition, comment on the feasibility of each option.

Business Function	Current Value
Cost of Inputs	$50,000
Production Costs	$30,000
Revenue	$83,000

What would be the impact on profit due to marketing increasing sales (and both cost of inputs and production costs) by 50%?
A) increase of $1500
B) decrease of $1000
C) decrease of $2000
D) increase of $1000
E) profit will stay the same
Answer: A
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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6) Brandon Production is a small firm focused on the assembly and sale of custom computers. The firm is facing stiff competition from low-priced alternatives, and is looking at various solutions to remain competitive and profitable. Current financials for the firm are shown in the table below. In the first option, marketing will increase sales (and both cost of inputs and production costs) by 50%. The next option is Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs. Finally, there is an OM option, which would reduce production costs by 25%. Which of the options would you recommend to the firm if it can only pursue one option? In addition, comment on the feasibility of each option.

Business Function	Current Value
Cost of Inputs	$50,000
Production Costs	$30,000
Revenue	$83,000

What would be the impact on profit due to Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs?
A) increase of $2000
B) decrease of $1000
C) increase of $7500
D) increase of $6000
E) profit will stay the same.
Answer: D
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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7) Brandon Production is a small firm focused on the assembly and sale of custom computers. The firm is facing stiff competition from low-priced alternatives, and is looking at various solutions to remain competitive and profitable. Current financials for the firm are shown in the table below. In the first option, marketing will increase sales (and both cost of inputs and production costs) by 50%. The next option is Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs. Finally, there is an OM option, which would reduce production costs by 25%. Which of the options would you recommend to the firm if it can only pursue one option? In addition, comment on the feasibility of each option.

Business Function	Current Value
Cost of Inputs	$50,000
Production Costs	$30,000
Revenue	$83,000

What would be the impact on profit of the OM option, which would reduce production costs by 25%?
A) increase of $2000
B) decrease of $1000
C) increase of $7500
D) increase of $6000
E) profit will stay the same
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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8) Brandon Production is a small firm focused on the assembly and sale of custom computers. The firm is facing stiff competition from low-priced alternatives, and is looking at various solutions to remain competitive and profitable. Current financials for the firm are shown in the table below. In the first option, marketing will increase sales (and both cost of inputs and production costs) by 50%. The next option is Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs. Finally, there is an OM option, which would reduce production costs by 25%. Which of the options would you recommend to the firm if it can only pursue one option? In addition, comment on the feasibility of each option.

Business Function	Current Value
Cost of Inputs	$50,000
Production Costs	$30,000
Revenue	$83,000

Which of the options would you recommend to the firm if it can only pursue one option?
A) marketing option
B) vendor/supplier changes
C) OM option
D) indifferent to either option
E) none of the above
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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9) Brandon Production is a small firm focused on the assembly and sale of custom computers. The firm is facing stiff competition from low-priced alternatives, and is looking at various solutions to remain competitive and profitable. Current financials for the firm are shown in the table below. In the first option, marketing will increase sales (and costs) by 50%. The next option is Vendor (Supplier) changes, which would result in a decrease of 12% in the cost of inputs. Finally, there is an OM option, which would reduce production costs by 25%. Which of the options would you recommend to the firm if it can only pursue one option? In addition, comment on the feasibility of each option.

Business Function	Current Value
Cost of Inputs	$50,000
Production Costs	$30,000
Revenue	$83,000

Answer: Marketing would increase sales to $124,500 ($83,000 ∗ 1.5) but increase cost of inputs and production costs to $120,000 (($50,000 + $30,000) ∗ 1.5). This would net an additional $1,500 of profit ($124,500 - $120,000 - current profit of $3,000). Vendor (Supplier) changes would decrease cost of inputs to $44,000 ($50,000 ∗ .88), resulting in $6,000 of additional profit (savings) ($50,000 - $44,000). Finally, the OM option would save $7,500 ($30,000 - $30,000 ∗ .75), resulting in an additional $7,500 of profit. Thus, the OM option is the most profitable. Comments on feasibility should center on the near impossibility of increasing revenue by 50%, while noting the other two options are difficult but not impossible.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 5 What Operations Managers Do

1) The operations manager performs the management activities of planning, organizing, staffing, leading, and controlling of the OM function.
Answer: TRUE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) "Managing statistical process control" is within the strategic operations management decision area of *managing quality*.
Answer: TRUE
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) The strategic OM decision involving the *design of goods and services* defines much of what is required of operations in each of the other OM decisions.
Answer: TRUE
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) "Managing statistical process control" is within the strategic operations management decision area of *managing process and capacity strategies*.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

5) Determining what is to be purchased, from whom, and under what conditions is within the strategic operations management decision area of *supply chain management*.
Answer: TRUE
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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6) Making decisions that effectively and efficiently use both personnel and facilities is within the strategic operations management decision area of *scheduling*.
Answer: TRUE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) Integrating capacity needs, personnel levels, technology and inventory requirements to determine the efficient flow of materials people and information is within the strategic operations management decision area of *managing process and capacity strategies*.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

8) Using judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government is within the strategic operations management decision area of *layout strategies*.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

9) Integrating capacity needs, personnel levels, technology and inventory requirements to determine the efficient flow of materials people and information is within the strategic operations management decision area of *layout strategies*.
Answer: TRUE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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10) Using judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government is within the strategic operations management decision area of *location strategies*.
Answer: TRUE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

11) Determining what is to be purchased, from whom, and under what conditions is within the strategic operations management decision area of *process and capacity strategies*.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

12) Making scheduling decisions that effectively and efficiently use both personnel and facilities is within the strategic operations management decision area of *work measurement*.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

13) In order to have a career in operations management, one must have a degree in statistics or quantitative methods.
Answer: FALSE
Diff: 1
Objective: LO 1.3 Identify career opportunities in operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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14) What are the five elements in the management process?
A) plan, direct, update, lead, and supervise
B) accounting, finance, marketing, operations, and management
C) organize, plan, control, staff, and manage
D) plan, organize, staff, lead, and control
E) plan, lead, organize, manage, and control
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

15) Which of the following is NOT an element of the management process?
A) controlling
B) leading
C) planning
D) pricing
E) staffing
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

16) An operations manager is NOT likely to be involved in:
A) the design of goods and services to satisfy customers' wants and needs.
B) the quality of goods and services to satisfy customers' wants and needs.
C) the identification of customers' wants and needs.
D) work scheduling to meet the due dates promised to customers.
E) maintenance schedules.
Answer: C
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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17) All of the following decisions fall within the scope of operations management EXCEPT for:
A) creating the company income statement.
B) design of goods and services.
C) location strategies.
D) managing quality and statistical process control.
E) human resources, job design and work measurement.
Answer: A
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

18) Part of the 10 strategic operations management decisions include:
A) layout strategies.
B) maintenance.
C) process and capacity strategies.
D) managing quality.
E) all of these.
Answer: E
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

19) Which of the following is NOT one of the 10 strategic operations management decisions?
A) layout strategies
B) maintenance
C) process and capacity strategies
D) mass customization
E) supply chain management
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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20) Which of the following is one of the 10 strategic operations management decisions?
A) depreciation policy for tax returns
B) advertising
C) process and capacity strategies
D) pricing
E) debt/equity ratio
Answer: C
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

21) Which of the following are among the 10 strategic operations management decisions?
I. design of goods and services
II. managing quality
III. layout strategies
IV. marketing
V. pricing of goods and services
A) I, II, V
B) I, II, IV
C) II, III, V
D) I, II, III
E) I, II, III, IV, V
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

22) Which of the following influences layout design?
A) inventory requirements
B) capacity needs
C) personnel levels
D) technology
E) All of these influence layout decisions.
Answer: E
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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23) Which of the following is NOT a strategic operations management decision?
A) maintenance
B) price
C) layout
D) quality
E) inventory
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

24) Which strategic operations management decision involves defining much of what is required of operations in each of the other OM decision areas?
A) managing quality
B) design of goods and services
C) process and capacity strategies
D) layout strategies
E) job design and work measurement
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

25) Which strategic operations management decision involves establishing policies and procedures to identify and achieve the customer's quality expectations?
A) managing quality and statistical process control
B) maintenance
C) process and capacity strategies
D) layout strategies
E) job design and work measurement
Answer: A
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
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26) Which strategic OM decision involves determining the efficient flow of materials and information?
A) statistical process control
B) maintenance
C) process and capacity strategies
D) layout strategies
E) job design and work measurement
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

27) Which strategic operations management decision involves determining how a good or service is produced and commits management to specific resource investments that determine much of the firm's basic cost structure?
A) location strategies
B) maintenance
C) process and capacity strategies
D) layout strategies
E) job design and work measurement
Answer: C
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

28) Which strategic operations management decision requires judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government?
A) location strategies
B) scheduling
C) process and capacity strategies
D) layout strategies
E) job design and work measurement
Answer: A
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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29) Which strategic operations management decision determines how to recruit, motivate, and retain personnel with the required talent and skills?
A) location strategies
B) scheduling
C) process and capacity strategies
D) layout strategies
E) human resources, job design and work measurement
Answer: E
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

30) Which strategic operations management decisions determine what is to be purchased, from whom, and under what conditions?
A) location strategies
B) supply chain management
C) process and capacity strategies
D) layout strategies
E) human resources, job design and work measurement
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

31) Which strategic operations management decisions effectively and efficiently use both personnel and facilities while meeting customer needs?
A) location strategies
B) maintenance
C) process and capacity strategies
D) layout strategies
E) scheduling
Answer: E
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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32) Which strategic operations management decision considers facility capacity, production demands, and personnel necessary to maintain a reliable and stable process?
A) location strategies
B) maintenance
C) process and capacity strategies
D) layout strategies
E) scheduling
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

33) The strategic operations management decision that involves defining much of what is required of operations in each of the other OM decision areas is _____.
Answer: design of goods and services
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

34) The strategic operations management decision that involves establishing policies and procedures to identify and achieve the customer's quality expectations is _____.
Answer: managing quality and statistical process control
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

35) The strategic OM decision that involves determining the efficient flow of materials and information is _____.
Answer: layout strategies
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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36) The strategic operations management decision that involves determining how a good or service is produced and commits management to specific resource investments that determine much of the firm's basic costs structure is _____.
Answer: process and capacity strategies
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

37) The strategic operations management decision that requires judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government is _____.
Answer: location strategies
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

38) The strategic operations management decision that determines how to recruit, motivate, and retain personnel with the required talent and skills is _____.
Answer: human resources, job design and work measurement
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

39) The strategic operations management decisions that determine what is to be purchased, from whom, and under what conditions is:
A) quality management
B) supply chain management.
C) process and capacity strategies.
D) layout strategies.
E) human resources, job design and work measurement.
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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40) The strategic operations management decisions that effectively and efficiently use both personnel and facilities while meeting customer needs is _____.
Answer: scheduling
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

41) The strategic operations management decision that considers facility capacity, production demands, and personnel necessary to maintain a reliable and stable process is _____.
Answer: maintenance
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

42) The strategic operations management decision that considers inventory ordering and holding decisions and how to optimize them as customer satisfaction, supplier capability, and production schedules are considered is _____.
Answer: inventory management
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

43) Identify two operations-related tasks carried out by Hard Rock Café. Match each to its related area of the 10 strategic operations management decisions.
Answer: Providing custom meals: design of goods and services; designing, testing, and costing meals: design of goods and services; acquiring, receiving, and storing supplies: supply chain management; recruiting and training employees: human resources, job design and measurement; preparing employee schedules: scheduling; designing efficient restaurant layouts: layout strategies.
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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44) Identify the 10 strategic OM decisions.
Answer: Design of goods and services, managing quality, process strategies, location strategies, layout strategies, human resources, supply chain management, inventory management, scheduling, and maintenance.
Diff: 3
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 6 The Heritage of Operations Management

1) Frederick W. Taylor is known as the Father of Scientific Management.
Answer: TRUE
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) Shewhart's contributions to operations management came during the Scientific Management Era.
Answer: FALSE
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Walter Shewhart is listed among the important people of operations management because of his contributions to:
A) assembly line production.
B) measuring productivity in the service sector.
C) just-in-time inventory methods.
D) statistical quality control.
E) information technology.
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Walter Shewhart, in the _____, provided the foundations for _____ in operations management.
A) 1920s; statistical sampling
B) United Kingdom; mass production
C) U.S. Army; logistics
D) nineteenth century; interchangeable parts
E) 1900s; queuing theory
Answer: A
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) Eli Whitney, in the _____, provided the foundations for _____ in operations management.
A) 1920s; statistical sampling
B) United Kingdom; mass production
C) U.S. Army; logistics
D) nineteenth century; interchangeable parts
E) 1890s; queuing theory
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) Who was the person most responsible for popularizing interchangeable parts in manufacturing?
A) Frederick W. Taylor
B) Henry Ford
C) Eli Whitney
D) Whitney Houston
E) Lillian Gilbreth
Answer: C
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) The "Father of Scientific Management" is:
A) Henry Ford.
B) Frederick W. Taylor.
C) W. Edwards Deming.
D) Frank Gilbreth.
E) just a figure of speech, not a reference to a person.
Answer: B
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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8) Henry Ford is noted for his contributions to:
A) material requirements planning.
B) statistical quality control.
C) assembly line operations.
D) scientific management.
E) time and motion studies.
Answer: C
Diff: 1
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

9) Who among the following is associated with contributions to quality control in operations management?
A) Charles Babbage
B) Henry Ford
C) Frank Gilbreth
D) W. Edwards Deming
E) Henri Fayol
Answer: D
Diff: 2
Objective: LO 1.2 Identify the 10 strategic decisions of operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

10) The field of operations management is shaped by advances in which of the following fields?
A) chemistry and physics
B) industrial engineering and management
C) biology and anatomy
D) information technology
E) all of the these
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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11) Which of the following statements is TRUE?
A) The person most responsible for initiating the use of interchangeable parts in manufacturing was Eli Whitney.
B) The origins of management by exception are generally credited to Frederick W. Taylor.
C) The person most responsible for initiating the use of interchangeable parts in manufacturing was Walter Shewhart.
D) The origins of the scientific management movement are generally credited to Henry Ford.
E) The person most responsible for initiating the use of interchangeable parts in manufacturing was Henry Ford.
Answer: A
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

12) Which of the following pioneers was NOT making a professional impact during the Scientific Management Era?
A) Frank Gilbreth
B) W. Edwards Deming
C) Henry L. Gantt
D) Lillian Gilbreth
E) Frederick W. Taylor
Answer: B
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

13) Internet of Things is associated with which operations management time period?
A) Customization Focus
B) Quality Focus
C) Globalization Focus
D) Cost Focus.
E) Just-In-Time Focus
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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14) Which of the following events occurs mainly during the Globalization Era?
A) Electronic Data Interchange
B) Computer-Aided Design
C) Industry 4.0
D) Enterprise Resource Planning
E) Gantt Charts
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

15) Which of the following is TRUE regarding the significant events in operations management?
A) The Mass Customization Era focused on quality.
B) The Globalization Era will start approximately in 2025.
C) Eli Whitney initiated the revolution of Industry 4.0.
D) The concept of linear programming first appeared in the Lead Production Era.
E) Charles Sorensen was instrumental in the development of the moving assembly line.
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

16) Henry Ford and _____ are credited with the development of the moving assembly line.
Answer: Charles Sorensen
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

17) _____ is known as the father of scientific management.
Answer: Frederick W. Taylor
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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18) Identify the items that Frederick W. Taylor believed management should be more responsible for.
Answer: He believed that management should be more responsible for matching employees to the right job, providing the proper training, providing proper work methods and tools, and establishing legitimate incentives for work to be accomplished.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

19) Operations managers should be well versed in what disciplines in order to make good decisions?
Answer: Analytical tools, information technology, and often one of the biological or physical sciences.
Diff: 2
Objective: LO 1.3 Identify career opportunities in operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 7 Operations for Goods and Services

1) Customer interaction is often high for manufacturing processes, but low for services.
Answer: FALSE
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) Services now constitutes the largest economic sector in postindustrial societies.
Answer: TRUE
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Although the *number* of people employed in manufacturing in the United States has decreased since 1950, each person is now producing almost 50 times more than in 1950.
Answer: FALSE
Diff: 1
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Which of the following is the best example of a pure service?
A) counseling
B) oil change
C) heart transplant
D) electric Co-Op
E) restaurant
Answer: A
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) The service sector makes up approximately what percentage of all jobs in the United States?
A) 12%
B) 40%
C) 66%
D) 86%
E) 94%
Answer: D
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) Which is NOT true regarding differences between goods and services?
A) Tangible goods are generally produced and consumed simultaneously; services are not.
B) Most goods are common to many customers; services are often unique to the final customer.
C) Services tend to have a more inconsistent product definition than goods.
D) Services tend to have higher customer interaction than goods.
E) None, i.e., all of these are true.
Answer: A
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) Which is NOT true regarding differences between goods and services?
A) Services are generally produced and consumed simultaneously; tangible goods are not.
B) Services tend to be more knowledge-based than goods.
C) Services tend to have a more inconsistent product definition than goods.
D) Goods tend to have higher customer interaction than services.
E) Reselling is unusual in services; goods often have some residual value.
Answer: D
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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8) Which of the following services is LEAST likely to be unique, i.e., customized to a particular individual's needs?
A) dental care
B) hairdressing
C) legal services
D) elementary education
E) computer consulting
Answer: D
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Reflective thinking; Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

9) Which of the following is NOT a typical service attribute?
A) intangible product
B) easy to store
C) customer interaction is high
D) simultaneous production and consumption
E) difficult to resell
Answer: B
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

10) Which of the following attributes is most typical of a service?
A) production and consumption occur simultaneously
B) tangible
C) mass production
D) consistency
E) easy to automate
Answer: A
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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11) Which of the following is a similarity between goods and services?
A) mass production
B) consistency
C) automation
D) both have quality standards
E) both can usually be kept in inventory
Answer: D
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

12) When a tangible component is not included in a service, such as with counseling, it is called a(n) _____.
Answer: pure service
Diff: 1
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

13) Customer interaction is often _____ for manufacturing processes, but _____ for services.
Answer: low; high
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

14) How do services differ from goods? Identify five ways.
Answer: Pick from the following: a service is usually intangible; it is often produced and consumed simultaneously; it is often unique; it involves high customer interaction; product definition is inconsistent; it is often knowledge-based; it is frequently dispersed; quality may be hard to evaluate; and reselling is unusual.
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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15) Identify the similarities between the operational activities for goods and services.
Answer: Both have quality standards, are designed and produced on a schedule that meets customer demand, and are made in a facility where people are employed.
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 8 The Productivity Challenge

1) Productivity is generally more difficult to improve in the service sector than in the manufacturing sector.
Answer: TRUE
Diff: 2
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) A knowledge society is one that has migrated from work based on knowledge to one based on manual work.
Answer: FALSE
Diff: 1
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Productivity is the total value of all inputs to the transformation process divided by the total value of the outputs produced.
Answer: FALSE
Diff: 1
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Illiteracy and poor diets have been known to cost countries up to what percent of their productivity?
A) 2%
B) 5%
C) 10%
D) 20%
E) 50%
Answer: D
Diff: 2
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Diverse and multicultural work environments; Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) A foundry produces circular utility access hatches (manhole covers). If 16 covers are produced in an 8-hour shift, the productivity of the line is:
A) 0.5 covers/hr.
B) 2 covers/hr.
C) 5 covers/hr.
D) 128 covers/hr.
E) 20 covers/hr.
Answer: B
Diff: 1
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) A foundry produces circular utility access hatches (manhole covers). Currently, 120 covers are produced in a 10-hour shift. If labor productivity decreases by 20% due to a process change, it would then be:
A) 14.4 covers/hr.
B) 9.6 covers/hr.
C) 144 covers/hr.
D) 96 covers/hr.
E) 11.8 covers/hr.
Answer: B
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) Gibson Valves produces cast bronze valves on an assembly line. If 1200 valves are produced in an 8-hour shift, the productivity of the line is:
A) 20 valves/hr.
B) 120 valves/hr.
C) 200 valves/hr.
D) 150 valves/hr.
E) 1200 valves/hr.
Answer: D
Diff: 1
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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8) Gibson Valves produces cast bronze valves on an assembly line, currently producing 1600 valves each 8-hour shift. If the productivity increases by 30%, it would then be:
A) 60 valves/hr.
B) 260 valves/hr.
C) 220 valves/hr.
D) 204 valves/hr.
E) 2080 valves/hr.
Answer: B
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

9) Gibson Valves produces cast bronze valves on an assembly line, currently producing 1600 valves per shift. If the production is increased to 1920 valves per shift, labor productivity will increase by:
A) 17%.
B) 20%.
C) 25%.
D) 40%.
E) 50%.
Answer: B
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

10) The Dulac Box plant produces 1000 cypress packing boxes in two 10-hour shifts. What is the productivity of the plant?
A) 25 boxes/hr.
B) 50 boxes/hr.
C) 5000 boxes/hr.
D) 0.04 boxes/hr.
E) 500 boxes/hr.
Answer: B
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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11) The Dulac Box plant works two 8-hour shifts each day. In the past, 1000 cypress packing boxes were produced by the end of each day. The use of new technology has enabled them to increase productivity by 30%. Productivity is now approximately:
A) 32.5 boxes/hr.
B) 40.6 boxes/hr.
C) 162.5 boxes/hr.
D) 81.25 boxes/hr.
E) 125 boxes/hr.
Answer: D
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

12) The Dulac Box plant produces 500 cypress packing boxes in two 10-hour shifts. Due to higher demand, they have decided to operate three 8-hour shifts instead. They are now able to produce 600 boxes per day. What has happened to productivity?
A) It has not changed.
B) It has increased by 37.5 boxes/hr.
C) It has increased by 20%.
D) It has decreased by 8.3%.
E) It has decreased by 9.1%.
Answer: A
Diff: 2
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

13) Productivity measurement is complicated by:
A) the competition's output.
B) the fact that precise units of measure are often unavailable.
C) stable quality.
D) the workforce size.
E) the type of equipment used.
Answer: B
Diff: 2
Objective: LO 1.5 Explain the difference between production and productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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14) The total of all outputs produced by the transformation process divided by the total of the inputs is:
A) utilization.
B) greater in manufacturing than in services.
C) defined only for manufacturing firms.
D) multifactor or total factor productivity.
E) single-factor productivity.
Answer: D
Diff: 2
Objective: LO 1.7 Compute multifactor productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

15) Which productivity variable has the greatest potential to increase productivity?
A) labor
B) globalization
C) management
D) capital
E) energy
Answer: C
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

16) Which of the following nets the largest productivity improvement?
A) increase output 15%
B) decrease input 15%
C) increase both output and input by 5%
D) increase output 10%, decrease input 3%
E) decrease input 10%, increase output 3%
Answer: B
Diff: 3
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking; Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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17) Productivity can be improved by:
A) increasing inputs while holding outputs steady.
B) decreasing outputs while holding inputs steady.
C) increasing inputs and outputs in the same proportion.
D) decreasing inputs while holding outputs steady.
E) none of the above.
Answer: D
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking; Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

18) The largest contributor to productivity increases is _____, estimated to be responsible for _____ of the annual increase.
A) management; over one-half
B) Mr. Deming; one-half
C) marketing and sales; two-thirds
D) capital; 90%
E) technology; over one-half
Answer: A
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

19) The factor responsible for the largest portion of productivity increase in the United States is:
A) labor.
B) management.
C) capital.
D) all of the above; it is impossible to determine the contribution of individual factors.
E) none of these.
Answer: B
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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20) Which of the following is NOT true when explaining why productivity tends to be lower in the service sector than in the manufacturing sector?
A) Services are typically labor-intensive.
B) Services are often difficult to evaluate for quality.
C) Services are often an intellectual task performed by professionals.
D) Services are difficult to automate.
E) Service operations are typically capital intensive.
Answer: E
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

21) Three commonly used productivity variables are:
A) quality, external elements, and precise units of measure.
B) labor, capital, and management.
C) technology, raw materials, and labor.
D) education, diet, and social overhead.
E) quality, efficiency, and low cost.
Answer: B
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

22) The service sector has lower productivity improvements than the manufacturing sector because:
A) the service sector uses less skilled labor than manufacturing.
B) the quality of output is lower in services than manufacturing.
C) services usually are labor-intensive.
D) service sector productivity is hard to measure.
E) the service sector is often easy to mechanize and automate.
Answer: C
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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23) Productivity tends to be more difficult to improve in the service sector because the work is:
A) often difficult to automate.
B) typically labor-intensive.
C) frequently processed individually.
D) often an intellectual task performed by professionals.
E) All of these make service productivity more difficult.
Answer: E
Diff: 2
Objective: LO 1.4 Explain the distinction between goods and services
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

24) A small metal shop operates 8 hours each day, producing 200 parts/hour. If productivity were increased 30%, how many hours would the plant have to work to produce 1600 parts?
A) less than 5 hours
B) between 5 and 6 hours
C) between 6 and 7 hours
D) between 7 and 8 hours
E) more than 8 hours
Answer: C
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

25) A cleaning company uses 10 lbs each of chemicals A, B, and C for each house it cleans. After some quality complaints, the company has decided to increase its use of chemical A by an additional 10 lbs for each house. By what % has productivity (houses per pound of chemical) fallen?
A) 0%
B) 10%
C) 15%
D) 25%
E) 33%
Answer: D
Diff: 3
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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26) A cleaning company uses $10 of chemicals, $40 of labor, and $5 of misc. expenses for each house it cleans. After some quality complaints, the company has decided to increase its use of chemicals by 50%. By what percentage has multifactor productivity fallen?
A) 0%
B) 8.3%
C) 25%
D) 50%
E) 16.7%
Answer: B
Diff: 3
Objective: LO 1.7 Compute multifactor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

27) Starbucks stopped requiring signatures on credit-card purchases under $25 in an attempt to reduce _____.
Answer: transaction time (or service time)
Diff: 1
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

28) _____ is the total of all outputs produced by the transformation process divided by the total of the inputs.
Answer: Multifactor productivity
Diff: 1
Objective: LO 1.7 Compute multifactor productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

29) Productivity is the ratio of _____ to _____. Using this relationship, productivity can be improved by _____ or _____.
Answer: outputs; inputs; reducing inputs while holding outputs constant; increasing outputs while holding inputs constant
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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30) Identify the three productivity variables used in the text.
Answer: The three common variables are labor, capital, and management.
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

31) What is a knowledge society?
Answer: A knowledge society is one in which much of the labor force has migrated from manual work to work based on knowledge.
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

32) As the administrative manager in a law office, you have been asked to develop a system for evaluating the productivity of the 15 lawyers in the office. What difficulties are you going to have in doing this, and how are you going to overcome them?
Answer: Productivity measures for a law office are difficult. Simple criteria, like number of cases processed, fail to consider complexity of the case. Even counting wins is difficult, as many cases are settled with some sort of compromise. External elements such as the quality of the opposing counsel and the tenacity of the opposition also make counting look rather silly.

Categories of cases can help (i.e., uncontested divorce, no personal injury auto case, etc.). However, many firms end up counting hours billed. This in turn leads to other problems, as noted by the number of false billing cases.
Diff: 3
AACSB: Reflective thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

33) List three key variables for improved labor productivity.
Answer: Basic education appropriate for an effective labor force; diet of the labor force; social overhead that makes labor available, such as transportation and sanitation.
Diff: 2
Objective: LO 1.8 Identify the critical variables in enhancing productivity
AACSB: Diverse and multicultural work environments
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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34) Susan has a part-time business producing seasonal plywood yard ornaments for resale at local craft fairs and bazaars. She currently works 8 hours per day to produce 24 ornaments.
(a) What is her productivity?
(b) She thinks that by redesigning the ornaments and switching from use of a wood glue to a hot-glue gun she can increase her total production to 30 ornaments per day. What is her new productivity?
(c) What is her percentage increase in productivity?
Answer:
(a) 24 ornaments/8 hours = 3 ornaments/hour
(b) 30 ornaments/8 hours = 3.75 ornaments/hour
(c) Change in productivity = 0.75 ornaments/hour; percent change = 0.75/3 = 25%
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

35) A firm cleans chemical tank cars in the Bay St. Louis area. With standard equipment, the firm typically cleaned 70 chemical tank cars per month. They utilized 12 gallons of solvent, and two employees worked 20 days per month, 8 hours a day. The company decided to switch to a larger cleaning machine. Last April, they cleaned 60 tank cars in only 15 days. They utilized 15 gallons of solvent, and the two employees worked 8 hours a day.
(a) What was their raw material and their labor productivity with the standard equipment?
(b) What is their raw material and their labor productivity with the larger machine?
(c) What is the change in each productivity measure?
Answer:

Resource	**(a) Standard Equipment**	**(b) Larger Machine**	**(c) Percent Change**
Solvent	70/12 = 5.83	60/15 = 4	(4 - 5.83)/5.83 = -31.39%
Labor	70/320 = 0.22	60/240 = 0.25	(0.25 - 0.22)/0.22 = 13.64%

Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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36) The Dulac Box plant produces wooden packing boxes to be used in the local seafood industry. Current operations allow the company to make 500 boxes per day, in two 8-hour shifts (250 boxes per shift). The company has introduced some small changes in equipment, and conducted appropriate job training, so that production levels have risen to 400 boxes per shift. These changes did not require any change in the amount of capital spending or energy use. What is the firm's new labor productivity?
Answer: 800 boxes per day / 16 hours = 50 boxes per hour
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

37) Mark's Ceramics spent $4000 on a new kiln last year in the belief that it would cut annual energy usage 25% over the old kiln. This kiln is an oven that turns "greenware" into finished pottery. Mark is concerned that the new kiln requires extra labor hours for its operation. Mark wants to check the energy savings of the new oven, and also to look over other measures of their productivity to see if the change really was beneficial. Mark has the following data to work with:

	Last Year	This Year
Production (finished units)	4000	4000
Greenware (pounds)	5000	5000
Labor (hrs)	350	390
Capital ($)	15000	20000
Energy (kWh)	4000	2800

Were the modifications beneficial?
Answer: The energy modifications generated more than the expected energy savings; however, labor and capital productivity decreased.

Resource	Last Year	This Year	Change	Pct. Change
Labor	4000 / 350 = 11.43	4000 / 390 = 10.26	-1.17	-10.24%
Capital	4000 / 15000 = 0.27	4000 / 20000 = .20	-0.07	-25.93%
Energy	4000 / 4000 = 1.00	4000 / 2800 = 1.43	0.43	43%

Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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38) Martin Manufacturing has implemented several programs to improve its productivity. They have asked you to evaluate the firm's productivity by comparing this year's performance with last year's. The following data are available:

	Last Year	This Year
Output	10,500 units	12,100 units
Labor Hours	12,000	13,200
Utilities	$7,600	$8,250
Capital	$83,000	$88,000

Has Martin Manufacturing improved its productivity during the past year?
Answer: Productivity improved in all three categories this year; utilities showed the greatest increase, and labor the least.

Resource	Last Year	This Year	Change	Pct. Change
Labor	10500 / 12000 = 0.88	12100 / 13200 = 0.92	0.04	4.55%
Utilities	10500 / 83000 = 0.13	12100 / 88000 = 0.14	0.01	7.69%
Capital	10500 / 7600 = 1.38	12100 / 8250 = 1.47	0.09	6.52%

Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

39) Felicien grows mirlitons (that's Cajun for Chayote squash) in his 100 by 100-foot garden. He then sells the crop at the local farmers' market. Two summers ago, he was able to produce and sell 1200 pounds of mirlitons. Last summer, he tried a new fertilizer that promised a 50% increase in yield. He harvested 1700 pounds. Did the fertilizer live up to its promise?
Answer: Since the productivity gain was 41.67%, which is less than 50%, the fertilizer was not as good as advertised.

Two Summers Ago	Last Summer	Change
1200 ÷ 10,000 = .12 lbs/sq. ft	1700 ÷ 10,000 = .17 lbs/sq. ft	(.17 - .12) ÷ .12 = 41.67%

Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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40) The Dulac Box plant produces wooden packing boxes to be used in the local seafood industry. Current operations allow the company to make 500 boxes per day, in two 8-hour shifts (250 boxes per shift). The company has introduced some moderate changes in equipment, and conducted appropriate job training, so that production levels have risen to 350 boxes per shift. Labor costs average $15 per hour for each of the 5 full-time workers on each shift. Capital costs were previously $3,000 per day and rose to $3,200 per day with the equipment modifications. Energy costs were unchanged by the modifications, at $400 per day. What is the firm's multifactor productivity before and after the changes?
Answer: MFP before: 500 boxes / ($15 × 5 × 16 + $3000 + $400) = 500 / $4600 = 0.109 boxes/dollar
MFP after: 700 boxes / ($15 × 5 × 16 + $3200 + $400) = 700 / 4800 = 0.146 boxes/dollar
Diff: 2
Objective: LO 1.7 Compute multifactor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

41) Gibson Products produces cast bronze valves for use in offshore oil platforms. Currently, Gibson produces 1600 valves per day. The 20 workers at Gibson work from 7 a.m. until 4 p.m., with 30 minutes off for lunch and a 15-minute break during the morning work session and another at the afternoon work session. Gibson is in a competitive industry and needs to increase productivity to stay competitive. They feel that a 20 percent increase is needed.

Gibson's management believes that the 20 percent increase will not be possible without a change in working conditions, so they change work hours. The new schedule calls on workers to work from 7:30 a.m. until 4:30 p.m., during which workers can take one hour off at any time of their choosing. Obviously, the number of paid hours is the same as before, but production increases, perhaps because workers are given a bit more control over their workday. After this change, valve production increased to 1800 units per day.

(a) Calculate labor productivity for the initial situation.
(b) Calculate labor productivity for the hypothetical 20 percent increase.
(c) What is the productivity after the change in work rules?
(d) Write a short paragraph analyzing these results.
Answer:
(a) Workers are active for eight hours per day; labor productivity is 10 valves/hour
(b) If productivity rises by 20 percent, to 12 valves/hour; output would be 12 × 8 × 20 = 1920
(c) New productivity is 1800 / (20 × 8) = 11.25 valves/hour
(d) Gibson did not gain the desired 20 percent increase in productivity, but they did gain 12.5%, without extra equipment or energy, and without increasing the labor cost.
Diff: 3
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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42) A local university is considering changes to its class structure in an effort to increase professor productivity. The old schedule had each professor teaching 5 classes per week, with each class meeting an hour per day on Monday, Wednesday, and Friday. Each class contained 20 students. The new schedule has each professor teaching only 3 classes, but each class meets daily (Mon.-Fri.) for an hour. New classes contain 50 students.
(a) Calculate the labor productivity for the initial situation (students/hour).
(b) Calculate the labor productivity for the schedule change (students/hour).
(c) Are there any ethical considerations that should be accounted for?
(d) Suppose that each teacher also is required to have 2 hours of Office Hours each day he/she taught class. Is the schedule change a productivity increase?
Answer:
(a) Professors teach 100 students in 15 hours or 6.67 students/hour.
(b) Professors teach 150 students in 15 hours or 10 students/hour.
(c) Responses should focus on honoring stakeholder commitment and can include students per professor ratio, class sizes, quality of education, etc.
(d) Initial productivity is 100 students in 21 hours or 4.76 students/hour. New productivity is 150 students in 25 hours or 6 students/hour, an increase or 1.24 students/hour.
Diff: 3
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

43) A grocery chain is considering the installation of a set of 4 self-checkout lanes. The new self-checkout lane setup will replace 2 old cashier lanes that were staffed by a cashier and bagger on each lane. One cashier mans all 4 self-checkouts (answering questions, checking for un-scanned items, taking coupons, etc). Checkout on the new lanes takes 2 minutes (customers bag their own orders) while checkout with the old lanes took only 45 seconds. In addition, the electricity costs for both setups are $0.05 per checkout while bagging (material) costs are $0.10 per checkout with the old system and $0.15 for the new system. The new lanes also require $100/shift in capital costs. Assume that the lanes are always in use for 8 hours per day (1 shift) and that a worker makes $10/hour.
(a) How many checkouts did the old system provide in a shift?
(b) How many checkouts does the new system provide?
(c) What is the multifactor productivity for each system?
Answer:
(a) (2 lanes)(8 hours)(3600 seconds/hour)(1 checkout/45 seconds) = 1280 checkouts
(b) (4 lanes)(8 hours)(60 minutes/hour)(1 checkout/2 min) = 960 checkouts
(c) Cost for the old system = (4 workers)(8 hours)($10/hour) + ($0.10)(1280) + ($0.05)(1280) = $512. Cost for the new system = (1 worker)(8 hours)($10/hour) + ($0.15)(960) + ($0.05)(960) + $100 = $372. Multifactor productivity for old system = 1280 checkouts / $512 = 2.5 checkouts/$. Multifactor productivity for new system = 960 checkouts / $372 = 2.6 checkouts/$.
Diff: 3
Objective: LO 1.7 Compute multifactor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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44) A swimming pool company has 100,000 labor hours available per summer and with a labor productivity of 5 pools per 4,000 hours.
(a) How many pools can the company install this summer?
(b) Suppose the multifactor productivity was one pool per $25,000. How much should the company expect to spend this summer constructing the pools?
Answer:
(a) 100,000 hours × 5 pools/4000 hours = 125 pools
(b) 125 pools × $25,000/pool = $3,125,000
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

45) An industrial plant needs to make 100,000 parts per month to meet demand. Each month contains 20 working days, each of which allows for 3 separate 8 hour shifts.
(a) If a worker can produce 10 parts/hour, how many workers are needed on each shift?
(b) If each shift has 100 workers, what is the productivity of an individual worker?
(c) If material costs are $10/part, capital costs are $100,000 and labor costs are $10/hour, what is the multifactor productivity of the plant from part (a)?
Answer:
(a) 100,000 parts × (1 hour / 10 parts) × (1 shift / 8 hours) × (1 worker/60 shifts) = 20.83 = 21 workers
(b) 100,000 parts / [(60 shifts/worker) × (100 workers) × (8 hours/shift)] = 2.08 parts/hour
(c) 100,000 parts / [($10/part) × (100,000 parts) + $100,000 + (21 workers) × (60 shifts/worker) × (8 hours/shift) × ($10/hour)] = .083 parts/$1
Diff: 2
Objective: LO 1.7 Compute multifactor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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46) The local fast-food store experienced the following number of customers on the night shift:

Hour	Customers
12 AM	35
1 AM	28
2 AM	15
3 AM	5
4 AM	2
5 AM	1

If the store was staffed by three workers, what was the average productivity per worker, in customers/hour?
Answer: (35 + 28 + 15 + 5 + 2 + 1) customers/ (3 workers ∗ 6 hours/worker) = 86/18 = 4.78 customers/hour
Diff: 2
Objective: LO 1.6 Compute single-factor productivity
AACSB: Analytical thinking
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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Section 9 Current Challenges in Operations Management

1) Lean manufacturing means designing green products and packaging that minimize resource use, can be recycled or reused, and are generally environmentally friendly.
Answer: FALSE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

2) Technology combined with rapid international communication of news, entertainment, and lifestyles is dramatically increasing the life span of products.
Answer: FALSE
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

3) Current challenges in operations management include all of the following EXCEPT:
A) lean operations.
B) rapid product development.
C) mass customization.
D) sustainability.
E) increased communication cost.
Answer: E
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

4) Which of the following statements about challenges in operations management is FALSE?
A) Operations managers are outsourcing and building long-term partnerships with critical players in the supply chain.
B) Local or national focus is being replaced by global focus.
C) Sustainable production is being replaced by a low-cost focus.
D) Rapid product development is partly the result of shorter product cycles.
E) The goal of mass customization is to produce customized products, whenever and wherever needed.
Answer: C
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

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5) _____ is the ability of the organization to be flexible enough to cater to the individual whims of consumers.
Answer: Mass customization
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

6) _____ means designing green products and packaging that minimize resource use, can be recycled or reused, and are generally environmentally friendly.
Answer: Sustainability
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

7) Why are organizations changing from standardization to mass customization?
Answer: In the global marketplace, the cultural and individual differences become obvious. Therefore, as consumers become increasingly aware of innovation and options, substantial pressure is placed on firms to respond in a creative way.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss operations and operations management as a competitive advantage for the organization

8) Why are organizations becoming more global?
Answer: Organizations are becoming more global with the decline in the costs of communication and transportation. Additionally, resources in the form of capital, materials, talent, and labor are also now global.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss the influences of the global competitive environment on operations management

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Section 10 Ethics, Social Responsibility, and Sustainability

1) Ethical and social dilemmas arise because stakeholders of a business have conflicting perspectives.
Answer: TRUE
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

2) Stakeholders are always stockholders.
Answer: FALSE
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Application of knowledge
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

3) Which of the following is NOT among the ethical and social challenges facing operations managers?
A) honoring stakeholder commitments
B) training, retaining, and motivating employees
C) efficiently developing and producing safe high-quality green products
D) increasing executive pay
E) providing a safe workplace
Answer: D
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

4) A business's stakeholders, whose conflicting perspectives cause ethical and social dilemmas, include:
A) lenders.
B) suppliers.
C) owners.
D) employees.
E) all of these.
Answer: E
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

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5) What term is given to those individuals with a vested interest in an organization, including customers, distributors, suppliers, owners, lenders, employees, and community members?
A) alumni
B) investors
C) vestors
D) stockholders
E) stakeholders
Answer: E
Diff: 1
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

6) Why are operations managers faced with ethical and social challenges?
Answer: Businesses have diverse stakeholders, which include customers, distributors, suppliers, owners, lenders, employees, and the community. These stakeholders hold *conflicting perspectives*.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

7) What are some of the ethical and social challenges faced by operations managers?
Answer: Managers are challenged to develop and produce safe, high-quality green products; train, retain, and motivate employees in a safe workplace; and honor stakeholder commitments.
Diff: 2
Objective: LO 1.1 Define operations management
AACSB: Ethical understanding and reasoning
Learning Outcome: Discuss the role of operations management in corporate social responsibility and sustainability

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