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Chapter 02

Strategy and Sustainability

#### **True / False Questions**

1. An operations and supply chain strategy must be integrated with the organization's corporate strategy.

True False

2. One of the competitive dimensions that form the competitive position of a company when planning their strategies is cost.

True False

3. One of the competitive dimensions that form the competitive position of a company when planning their strategies is delivery speed.

True False

4. One of the competitive dimensions that form the competitive position of a company when planning their strategies is making the best trade-off.

True False

5. The process when a company seeks to match the benefits of a successful position while maintaining its existing position by adding new features, services, and technologies into its current portfolio is called flexibility.

True False

6. The process when a company seeks to match the benefits of a successful position while maintaining its existing position by adding new features, services, and technologies into its current portfolio it is called straddling.

7. By following a straddling strategy, firms can broaden their capabilities and effectively compete with more focused firms in markets requiring low cost for success.

True False

8. An order winner is a set of criteria that differentiates the products or services of one firm from another.

True False

9. An order winner is a set of screening criteria that permits a firm's products to be considered as possible candidates for purchase.

True False

10. An order qualifier is a set of screening criteria that permits a firm's products to be considered as possible candidates for purchase.

True False

11. Activity-system maps show how a company's strategy is delivered through a set of tailored activities.

True False

12. Activity-system maps are useful in understanding how well a system of activities fits the overall company's strategy.

True False

13. Activity-system maps depict the geographic reach of a company's business strategies.

True False

14. An operations strategy must resist change because of the long term nature of equipment and personnel investments.

15. Operations and supply strategy can be viewed as part of a planning process that coordinates operational goals with those of the larger organization.

True False

16. Infrastructure decisions within operations strategy include the selection of the appropriate technology, the role of inventory and the location of facilities.

True False

17. Infrastructure decisions within operations strategy include the selection of the logic associated with the planning and control systems

True False

18. Once an operations strategy is adopted and articulated, the primary emphasis becomes perfecting the system of activities that make up the strategy through detailed refinements over a long period of time.

True False

19. The job of operations and supply chain strategy is to deliver the most feature-rich, highest quality product at the lowest price within specified parameters of delivery time and customization.

True False

20. Productivity is a relative measure.

True False

21. In a partial measure of productivity the denominator of the ratio would include all resources used or all inputs.

True False

22. In a multifactor measure of productivity the numerator of the ratio would include all resources used or all inputs.

23. The triple bottom line considers evaluating the firm against social, economic, and environmental criteria.

True False

24. Sustainability means meeting a firm's current needs without excessively compromising the ability of future generations to meet their own needs.

True False

25. The social impact of the triple bottom line concept pertains to fair and beneficial business practices toward labor, the community, and the region in which a firm conducts its business.

True False

26. A firm's business practices toward its' labor force pertain mainly to the economic aspect of the triple bottom line concept.

True False

27. According to the economic aspect of the triple bottom line concept, the firm is required to compensate shareholders by paying dividends and growing the value of their common stock faster than their competitors.

True False

28. Within a sustainability framework, the economic dimension of the triple bottom line concept goes beyond just profit for the firm but also provides lasting economic benefit to society.

True False

29. Within a sustainability framework, the environmental dimension of the triple bottom line concept has to do with labor, the community, and the region in which a firm conducts its business.

## **Multiple Choice Questions**

- 30. Which of the following is not a major strategic operational competitive dimension that forms a company's competitive position?
  - A. Cost or price
  - B. Delivery speed
  - C. Delivery reliability
  - D. Management acumen
  - E. Coping with changes in demand
- 31. A major competitive dimension that forms a company's strategic operational competitive position in their strategic planning is which of the following?
  - A. Cost or price
  - B. Focus
  - C. Automation
  - D. Straddling
  - E. Activity-system mapping
- 32. When developing an operations and supply chain strategy, which of the following is an important product-specific criterion to consider?
  - A. Technical liaison
  - B. Learning curve
  - C. Competitor's product performance
  - D. Production lot-size
  - E. Total quality management

- 33. In development of an operations and supply chain strategy, which of the following may be an important product-specific criteria to consider?
  - A. Focus
  - B. Production lot-size
  - C. Supplier after-sale support
  - D. Learning curve
  - E. Total quality management
- 34. When a company seeks to match the benefits of a successful position while maintaining its existing position in offering customers a variety of differing services, what is this process called?
  - A. Operations capability analysis
  - B. Straddling
  - C. Order qualifying
  - D. Order winning
  - E. Inter-functional analysis
- 35. An activity-system map is which of the following?
  - A. A network guide to route airlines
  - B. A listing of activities that make up a project
  - C. A diagram that shows how a company's strategy is delivered to customers
  - D. A facility layout schematic noting what is done where
  - E. A timeline displaying major planned events
- 36. Which of the following is a partial measure of productivity?
  - A. Output/Materials
  - B. Output/(Labor + Capital + Energy)
  - C. Output/All resources used
  - D. Output/Inputs
  - E. All of the above

- 37. Which of the following is a multifactor measure of productivity?
  - A. Output/(Materials)
  - B. Output/(Labor + Capital + Energy)
  - C. Output/All resources used
  - D. Output/Inputs
  - E. All of the above
- 38. Which of the following is a total measure of productivity?
  - A. Output/Materials
  - B. Output/(Labor + Capital + Energy)
  - C. Output/Labor
  - D. Output/Inputs
  - E. All of the above
- 39. If all you knew about a production system was that total daily output was 400 units and the total labor necessary to produce the 400 units was 350 hours, what kind of productivity measure could you use to compute productivity?
  - A. Partial measure
  - B. Multifactor measure
  - C. Total measure
  - D. Global measure
  - E. All of the above

- 40. If all you knew about a production system was that total daily output was 400 units and the total labor necessary to produce the 400 units was 350 hours, and the total materials used were 425 units, what kind of productivity measure could you use to compute productivity?
  - A. Partial measure
  - B. Multifactor measure
  - C. Total measure
  - D. A and B above
  - E. B and C above
- 41. The total output from a production system in one day is 500 units and the total labor necessary to produce the 500 units is 350 hours. Using the appropriate productivity measure, which of the following numbers represents the resulting productivity ratio?
  - A. 1.000
  - B. 1.428
  - C. 0.700
  - D. 0.411
  - E. None of the above
- 42. The total output from a production system in one day is 900 units and the total labor necessary to produce the 900 units is 900 hours. Using the appropriate productivity measure, what is the resulting productivity ratio?
  - A. 1.000
  - B. 1.428
  - C. 0.700
  - D. 0.411
  - E. None of the above

43. Larry's Auto Body Repair Shop had revenues that averaged \$60,000 per week in April and \$50,000 per week in May. During both months, the shop employed six full-time (40 hours/week) workers. In April the firm also had four part-time workers working 25 hours per week but in May there were only 2 part-time workers and they only worked 10 hours per week. What is the percentage change in labor productivity from April to May for Larry's Auto Body Repair?

A. -20.00%

B. -15.82%

C. 8.95%

D. 2.3%

E. -25.00%

44. Various financial data for SunPath Manufacturing for 2012 & 2013 follow.

		<u>2012</u>	<u>2013</u>
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in SunPath's total productivity measure between 2012 & 2013?

A. -9.22

B. 2.33

C. -0.53

D. 2.88

E. 10.39

45. Various financial data for SunPath Manufacturing for 2012 & 2013 follow.

		<u>2012</u>	<u>2013</u>
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the energy partial productivity measure for SunPath between 2012 & 2013?

- A. -9.22%
- B. 2.33%
- C. -0.53%
- D. 2.88%
- E. 22.2%

46. Various financial data for SunPath Manufacturing for 2012 & 2013 follow.

		<u>2012</u>	2013
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the labor partial productivity measure for SunPath between 2012 & 2013?

- A. -9.22
- B. 2.33
- C. -0.53
- D. 2.88
- E. 10.39

47. Various financial data for SunPath Manufacturing for 2012 & 2013 follow.

		<u>2012</u>	<u>2013</u>
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the multifactor labor and raw materials productivity measure for SunPath between 2012 & 2013?

- A. -9.22
- B. 2.33
- C. -0.53
- D. **-**2.88
- E. 10.39

## Fill in the Blank Questions

What is a criterion or product characteristic that differentiates a product from the products of competitors in a way meaningful to the market called?		
diagram showing how a company's strategy is delivered through a set of allored activities is called what?		
_		

50. The triple-bottom-line evaluates the firm against what three criteria?
1
51. Individuals or organizations that are influenced, either directly or indirectly, by the actions of the firm are called:
52. People who provide capital to the firm through stock purchases are called:
Essay Questions

53. Describe a specific example of the trade-offs between any two of the competitive

dimensions.

# Chapter 02 Strategy and Sustainability Answer Key

#### **True / False Questions**

1. An operations and supply chain strategy must be integrated with the organization's corporate strategy.

### **TRUE**

Operations and supply chain strategy is concerned with setting broad policies and plans for using the resources of a firm and must be integrated with corporate strategy.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

2. One of the competitive dimensions that form the competitive position of a company when planning their strategies is cost.

#### **TRUE**

The major competitive dimensions that form the competitive position of a firm include cost (or price).

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

3. One of the competitive dimensions that form the competitive position of a company when planning their strategies is delivery speed.

#### **TRUE**

The major competitive dimensions that form the competitive position of a firm include delivery speed.

Blooms: Remember Difficulty: 1 Easy Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy. Topic: What is Operations and Supply Chain Strategy?

4. One of the competitive dimensions that form the competitive position of a (p. 30-21) company when planning their strategies is making the best trade-off.

## **FALSE**

The major competitive dimensions that form the competitive position of a firm do not include making the best trade-off.

AACSB: Analytic
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.
Topic: What is Operations and Supply Chain Strategy?

5. The process when a company seeks to match the benefits of a successful position while maintaining its existing position by adding new features, services, and technologies into its current portfolio is called flexibility.

## **FALSE**

Straddling occurs when a company seeks to match the benefits of a successful position while maintaining its existing position.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

AACSB: Analytic

6. The process when a company seeks to match the benefits of a successful position while maintaining its existing position by adding new features, services, and technologies into its current portfolio it is called straddling.

#### **TRUE**

Straddling occurs when a company seeks to match the benefits of a successful position while maintaining its existing position.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

7. By following a straddling strategy, firms can broaden their capabilities and effectively compete with more focused firms in markets requiring low cost for success.

#### **FALSE**

Straddling is a risky strategy that often results in failure. More focused firms can effectively compete with a straddling firm in each segment the straddling firm enters.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

8. An order winner is a set of criteria that differentiates the products or services of one firm from another.

#### **TRUE**

An order winner is a criterion that differentiates the products or services of one firm from those of another.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy 9. An order winner is a set of screening criteria that permits a firm's products to be considered as possible candidates for purchase.

#### **FALSE**

An order qualifier is a screening criterion that permits a firm's products to even be considered as possible candidates for purchase.

> AACSB: Analytic Blooms: Remember Difficulty: 1 Easy Learning Objective: 02-03 Identify order winners and order qualifiers. Topic: What is Operations and Supply Chain Strategy?

10. An order qualifier is a set of screening criteria that permits a firm's products to be considered as possible candidates for purchase.

#### **TRUE**

An order qualifier is a screening criterion that permits a firm's products to even be considered as possible candidates for purchase.

> AACSB: Analytic Blooms: Remember Difficulty: 1 Easy Learning Objective: 02-03 Identify order winners and order qualifiers. Topic: What is Operations and Supply Chain Strategy?

11. Activity-system maps show how a company's strategy is delivered through a (p. 34) set of tailored activities.

#### **TRUE**

Activity-system maps such as the one for IKEA show how a company's strategy is delivered through a set of tailored activities.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy 12. Activity-system maps are useful in understanding how well a system of activities fits the overall company's strategy.

#### **TRUE**

This type of map can be useful in understanding how good the fit is between the system of activities and the company's strategy.

AACSB: Analytic
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 02-04 See how strategy is implemented through operations and supply chain activities.
Topic: Strategies Are Implemented Using Operations and Supply Chain Activities—IKEA'S Strategy

13. Activity-system maps depict the geographic reach of a company's business (p. 34) strategies.

## **FALSE**

Activity system maps are conceptual have nothing to do with the physical geographic reach of a company.

AACSB: Analytic
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 02-04 See how strategy is implemented through operations and supply chain activities.
Topic: Strategies Are Implemented Using Operations and Supply Chain Activities— IKEA'S Strategy

14. An operations strategy must resist change because of the long term nature of equipment and personnel investments.

## **FALSE**

Since the goals of the larger organization change over time, the operations strategy must be designed to anticipate future needs.

AACSB: Analytic Blooms: Understand Difficulty: 1 Easy

15. Operations and supply strategy can be viewed as part of a planning process (p. 28) that coordinates operational goals with those of the larger organization.

#### **TRUE**

Operations and supply chain strategy can be viewed as part of a planning process that coordinates operational goals with those of the larger organization.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

16. Infrastructure decisions within operations strategy include the selection of the appropriate technology, the role of inventory and the location of facilities.

#### **FALSE**

Process design includes selecting the appropriate technology, sizing the process over time, determining the role of inventory in the process, and locating the process.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

17. Infrastructure decisions within operations strategy include the selection of the logic associated with the planning and control systems

## **TRUE**

The infrastructure decisions involve the logic associated with the planning and control systems, quality assurance and control approaches, work payment structure, and organization of the operations and supply functions.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium 18. Once an operations strategy is adopted and articulated, the primary emphasis becomes perfecting the system of activities that make up the strategy through detailed refinements over a long period of time.

#### **FALSE**

See the discussion around exhibit 2.2. Operations strategy is continually revised, re-planned & coordinated with the ever-changing corporate strategy.

Blooms: Remember
Difficulty: 2 Medium
Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.
Topic: What is Operations and Supply Chain Strategy?

19. The job of operations and supply chain strategy is to deliver the most feature(p. 28) rich, highest quality product at the lowest price within specified parameters of delivery time and customization.

## **FALSE**

Operations and supply chain strategy is concerned with setting broad policies and plans for using the resources of a firm and must be integrated with corporate strategy.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

AACSB: Analytic

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

20. Productivity is a relative measure.

(p. 37)

#### **TRUE**

Productivity is what we call a relative measure. In other words, to be meaningful, it needs to be compared with something else.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy 21. In a partial measure of productivity the denominator of the ratio would include  $^{(p.\ 38;}_{Exhibit}$  all resources used or all inputs.

#### **FALSE**

2.5)

2.5)

In a partial measure of productivity the denominator includes only a single input.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

22. In a multifactor measure of productivity the numerator of the ratio would include  $^{(p. 38;}$  all resources used or all inputs.

## **FALSE**

In a multi-factor measure of productivity the denominator includes several but not all inputs.

> AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

23. The triple bottom line considers evaluating the firm against social, economic, and environmental criteria.

#### **TRUE**

The triple bottom line considers evaluating the firm against social, economic, and environmental criteria.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy 24. Sustainability means meeting a firm's current needs without excessively compromising the ability of future generations to meet their own needs.

## **FALSE**

By adding "sustainability" to the concept (of strategy), we add the requirement to meet these current needs without compromising the ability of future generations to meet their own needs. (Excessively is not mentioned.)

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

25. The social impact of the triple bottom line concept pertains to fair and beneficial business practices toward labor, the community, and the region in which a firm conducts its business.

#### **TRUE**

"Social" pertains to fair and beneficial business practices toward labor, the community, and the region in which a firm conducts its business.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

26. A firm's business practices toward its' labor force pertain mainly to the conomic aspect of the triple bottom line concept.

#### **FALSE**

"Social" pertains to fair and beneficial business practices toward labor, the community, and the region in which a firm conducts its business.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium 27. According to the economic aspect of the triple bottom line concept, the firm is required to compensate shareholders by paying dividends and growing the value of their common stock faster than their competitors.

#### **FALSE**

The firm is obligated to compensate shareholders who provide capital through stock purchases and other financial instruments via a competitive return on investment.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

28. Within a sustainability framework, the economic dimension of the triple bottom line concept goes beyond just profit for the firm but also provides lasting economic benefit to society.

#### **TRUE**

Within a sustainability framework, this (economic) dimension goes beyond just profit for the firm but also provides lasting economic benefit to society.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

29. Within a sustainability framework, the environmental dimension of the triple bottom line concept has to do with labor, the community, and the region in which a firm conducts its business.

## **FALSE**

"Social" pertains to fair and beneficial business practices toward labor, the community, and the region in which a firm conducts its business.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

## **Multiple Choice Questions**

- 30. Which of the following is not a major strategic operational competitive  $^{(p.\ 30-}_{32)}$  dimension that forms a company's competitive position?
  - A. Cost or price
  - B. Delivery speed
  - C. Delivery reliability
  - **D.** Management acumen
  - E. Coping with changes in demand

The operational competitive dimensions that form a company's competitive position are listed on pages 30-32. Management acumen is not mentioned.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

31. A	major competitive dimension that forms a company's strategic operational
(p. 30) CO	ompetitive position in their strategic planning is which of the following?

A. Cost or price	
B. Focus	
C. Automation	
D. Straddling	
E. Activity-system mapping	ng

Cost or Price is one of the competitive dimensions mentioned in the text.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium d supply chain strategy.

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

- 32. When developing an operations and supply chain strategy, which of the following is an important product-specific criterion to consider?
  - A. Technical liaison
  - B. Learning curve
  - C. Competitor's product performance
  - D. Production lot-size
  - E. Total quality management

Technical liaison and support. A supplier may be expected to provide technical assistance for product development, particularly during the early stages of design and manufacturing.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

- 33. In development of an operations and supply chain strategy, which of the (p. 31) following may be an important product-specific criteria to consider?
  - A. Focus
  - B. Production lot-size
  - C. Supplier after-sale support
  - D. Learning curve
  - E. Total quality management

An important competitive dimension may be the ability of a firm to support its product after the sale

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-02 Understand the competitive dimensions of operations and supply chain strategy.

Topic: What is Operations and Supply Chain Strategy?

- 34. When a company seeks to match the benefits of a successful position while maintaining its existing position in offering customers a variety of differing services, what is this process called?
  - A. Operations capability analysis
  - **B.** Straddling
  - C. Order qualifying
  - D. Order winning
  - E. Inter-functional analysis

Straddling occurs when a company seeks to match the benefits of a successful position while maintaining its existing position.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

35.	An activity-system map is which of the following?
(p. 34)	

- A. A network guide to route airlines
- B. A listing of activities that make up a project
- C. A diagram that shows how a company's strategy is delivered to customers
- D. A facility layout schematic noting what is done where
- E. A timeline displaying major planned events

Activity-system maps such as the one for IKEA show how a company's strategy is delivered through a set of tailored activities.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-04 See how strategy is implemented through operations and supply chain activities.

Topic: Strategies Are Implemented Using Operations and Supply Chain Activities— IKEA'S Strategy

- 36. Which of the following is a partial measure of productivity? (p. 37)
  - A. Output/Materials
  - B. Output/(Labor + Capital + Energy)
  - C. Output/All resources used
  - D. Output/Inputs
  - E. All of the above

Answer A is correct. Answer B is a multifactor measure of productivity while C & D are measures of total productivity.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

37. Which of the following is a multifactor measure of productivity?

- A. Output/(Materials)
- **B.** Output/(Labor + Capital + Energy)
- C. Output/All resources used
- D. Output/Inputs
- E. All of the above

Answer B is correct. Answer A is a partial measure of productivity while C & D are measures of total productivity.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

38. Which of the following is a total measure of productivity? (p. 38)

- A. Output/Materials
- B. Output/(Labor + Capital + Energy)
- C. Output/Labor
- **D.** Output/Inputs
- E. All of the above

Answer D is correct. Answer A is a partial measure of productivity, Answer B is a multifactor measure of productivity while C is a measure of total productivity.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

- 39. If all you knew about a production system was that total daily output was 400 units and the total labor necessary to produce the 400 units was 350 hours, what kind of productivity measure could you use to compute productivity?
  - A. Partial measure
  - B. Multifactor measure
  - C. Total measure
  - D. Global measure
  - E. All of the above

Answer A is correct. Without measures of other inputs only a partial output measure is possible.

AACSB: Analytic Blooms: Analyze Difficulty: 1 Easy

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

- 40. If all you knew about a production system was that total daily output was 400 units and the total labor necessary to produce the 400 units was 350 hours, and the total materials used were 425 units, what kind of productivity measure could you use to compute productivity?
  - A. Partial measure
  - B. Multifactor measure
  - C. Total measure
  - D. A and B above
  - E. B and C above

Answer D is the most correct of the answers. You could use either a partial or a multifactor measure or both kinds of measure.

AACSB: Analytic Blooms: Analyze Difficulty: 1 Easy

- 41. The total output from a production system in one day is 500 units and the total labor necessary to produce the 500 units is 350 hours. Using the appropriate productivity measure, which of the following numbers represents the resulting productivity ratio?
  - A. 1.000
  - **B.** 1.428
  - C. 0.700
  - D. 0.411
  - E. None of the above

See exhibit 2.5, 500 units divided by 350 hours =1.428.

AACSB: Analytic Blooms: Analyze Difficulty: 2 Medium

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

- 42. The total output from a production system in one day is 900 units and the total labor necessary to produce the 900 units is 900 hours. Using the appropriate productivity measure, what is the resulting productivity ratio?
  - **A.** 1.000
  - B. 1.428
  - C. 0.700
  - D. 0.411
  - E. None of the above

Answer A is 900 units divided by 900 hours equals 1.0 units per hour.

AACSB: Analytic Blooms: Analyze Difficulty: 2 Medium

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

- 43. Larry's Auto Body Repair Shop had revenues that averaged \$60,000 per week in April and \$50,000 per week in May. During both months, the shop employed six full-time (40 hours/week) workers. In April the firm also had four part-time workers working 25 hours per week but in May there were only 2 part-time workers and they only worked 10 hours per week. What is the percentage change in labor productivity from April to May for Larry's Auto Body Repair?
  - A. -20.00%
  - B. -15.82%
  - <u>C.</u> 8.95%
  - D. 2.3%
  - E. -25.00%

Labor productivity is output (revenue) divided by hours of labor input. For April, revenue was \$60,000 and labor hours were 4x[(40x6)+(25x4)]. This is 60,000/1,360 or 44.12 dollars per hour of labor. For May, revenue was \$50,000 and labor hours were 4x[(40x6)+(10x2)] This is 50,000/1,040 or 48.07 dollars per hour of labor a difference of \$3.95 per hour. The percentage change in productivity between April and May, then, is  $3.95/44.12 = 0.0895 \times 100 = 8.95\%$ . (Note: this analysis assumes four weeks in each month and equal productivity for each hour worked.)

AACSB: Analytic Blooms: Analyze Difficulty: 3 Hard

44. Various financial data for SunPath Manufacturing for 2012 & 2013 follow. (p. 38)

		<u>2012</u>	2013
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in SunPath's total productivity measure between 2012 & 2013?

A. -9.22

B. 2.33

C. -0.53

**D.** 2.88

E. 10.39

Total productivity for 2012 is \$300,000 divided by the sum \$40,000 + \$45,000 + \$10,000 + \$250,000 + \$2,000 or 0.8646. Total productivity for 2013 is \$330,000 divided by the sum of \$43,000 + \$51,000 + \$9,000 + 262,000 + \$6,000 or 0.8895. The difference between 2012 and 2013 is 0.0249 and the percentage difference is 0.0249 divided by 0.8646 = 0.0288 or 2.88%

AACSB: Analytic Blooms: Analyze

Difficulty: 3 Hard

45. Various financial data for SunPath Manufacturing for 2012 & 2013 follow. (p. 38)

		<u>2012</u>	<u>2013</u>
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the energy partial productivity measure for SunPath between 2012 & 2013?

- A. -9.22%
- B. 2.33%
- C. -0.53%
- D. 2.88%
- **E.** 22.2%

The energy partial productivity measure for 2012 is \$300,000 divided by \$10,000 or 30. For 2013 it is \$330,000 divided by \$9,000 or 36.66. The percentage change between 2012 and 2013 then is (36.66 - 30)/30 or 6.66 divided by 30 = 22.2%.

AACSB: Analytic Blooms: Analyze Difficulty: 2 Medium

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

Various financial data for SunPath Manufacturing for 2012 & 2013 follow. 46. (p. 38)

		<u>2012</u>	2013
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the labor partial productivity measure for SunPath between 2012 & 2013?

- A. -9.22
- **B.** 2.33
- C. -0.53
- D. 2.88
- E. 10.39

The labor partial productivity measure for 2012 is \$300,000 divided by \$40,000 or 7.5. For 2013 it is \$330,000 divided by \$43,000 or 7.67. The percentage change between 2012 and 2013, then, is (7.67 - 7.5)/7.5 or 0.17 divided by 7.5 = 2.33%.

> AACSB: Analytic Blooms: Analyze Difficulty: 2 Medium

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

47. Various financial data for SunPath Manufacturing for 2012 & 2013 follow. (p. 38)

		<u>2012</u>	2013
Output:	Sales	\$300,000	\$330,000
Inputs:	Labor	\$40,000	\$43,000
	Raw Materials:	\$45,000	\$51,000
	Energy:	\$10,000	\$9,000
	Capital Employed:	\$250,000	\$262,000
	Other:	\$2,000	\$6,000

What is the percentage change in the multifactor labor and raw materials productivity measure for SunPath between 2012 & 2013?

- A. -9.22
- B. 2.33
- **C.** -0.53
- D. -2.88
- E. 10.39

The multifactor labor and raw materials productivity measure for 2012 is \$300,000 divided by the sum \$40,000 + \$45,000 or 3.53. For 2013 it is \$330,000 divided by the sum \$51,000 + \$43,000 or 3.51. The percentage change between 2012 and 2013, then is (3.511 - 3.529)/3.529 or -0.018 divided by 3.529 = -0.53%.

AACSB: Analytic Blooms: Analyze Difficulty: 3 Hard

Learning Objective: 02-06 Show how productivity is measured and how it relates to operations and supply chain processes.

Topic: Productivity Measurement

Fill in the Blank Questions

48.	What is a criterion or product characteristic that differentiates a product from
(p. 32)	the products of competitors in a way meaningful to the market called?

## Order winner

An order winner is a criterion that differentiates the products or services of one firm from those of another.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium Learning Objective: 02-03 Identify order winners and order qualifiers.

Learning Objective: 02-03 Identify order winners and order qualifiers.

Topic: What is Operations and Supply Chain Strategy?

49.	A diagram showing how a company's strategy is delivered through a set	of
(p. 34)	tailored activities is called what?	

#### **Activity-system map**

Activity-system maps such as the one for IKEA show how a company's strategy is delivered through a set of tailored activities.

AACSB: Analytic Blooms: Remember Difficulty: 2 Medium nd supply chain activities.

Learning Objective: 02-04 See how strategy is implemented through operations and supply chain activities.

Topic: Strategies Are Implemented Using Operations and Supply Chain Activities—IKEA'S Strategy

50. (p. 26)	The triple-bottom-line evaluates the firm against what three criteria?
	1 2
	3
	The text provides three alternatives: social, economic, and environmental; people, planet, and profit; or folk, work, and place
	The triple bottom line, Exhibit 2.1, considers evaluating the firm against social, economic, and environmental criteria. Many companies have developed this expanded view through goals that relate to sustainability along each of these dimensions. Some alternative phrases for the same concept are "People, Planet, and Profit" used by Shell Oil Company, and "Folk, Work, and Place" which originated with the 20 <sup>th</sup> -century writer Patrick Geddes.
	AACSB: Analytic Blooms: Remember Difficulty: 1 Easy Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.
	Topic: A Sustainable Operations and Supply Chain Strategy
51. (p. 26)	Individuals or organizations that are influenced, either directly or indirectly, by the actions of the firm are called:
	Stakeholders

Stakeholders are those individuals or organizations who are influenced, either directly or indirectly, by the actions of the firm.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

#### **Shareholders**

Shareholders provide capital through stock purchases & shareholders are those individuals or companies that legally own one or more shares of stock in the company.

AACSB: Analytic Blooms: Remember Difficulty: 1 Easy

Learning Objective: 02-01 Understand the parameters of a sustainable operations and supply chain strategy.

Topic: A Sustainable Operations and Supply Chain Strategy

## **Essay Questions**

53. Describe a specific example of the trade-offs between any two of the  $_{32}^{(p.\ 30-)}$  competitive dimensions.

This question requires that the student recall at least two of the seven competitive dimensions described under the heading "Competitive Dimensions" on pages 30-32 of the text. In evaluating the student's response the instructor should take care that the student's arguments do, indeed illustrate a "trade-off" or a situation where an improvement in one dimension comes at the cost of a lessening of a different dimension. A fairly common example is between achieving low cost (or price) at the expense of quality. For this example it is necessary for the student to specify that he or she is talking about reducing design quality to achieve low cost (for example) instead of process quality where quality improvements typically result in lowered cost.

Feedback: See discussion of trade-offs beginning on page 30.

54. Explain the role that "order qualifiers" and "order winners" play as the interface (p. 32-33) between marketing and operations.

The student's answer to this question should indicate the usefulness of articulating and differentiating between order winners and order qualifiers. In essence, these factors should indicate the essence of what is required to compete in the marketplace and the ways that the product or service, itself, differentiates itself from competing products and services. This topic is discussed in the text on pages 32-33 under the heading "Order Winners and Qualifiers: The Marketing-Operations Link."

Feedback: See discussion on pages 32-33.

AACSB: Analytic Blooms: Create Difficulty: 2 Medium

Learning Objective: 02-03 Identify order winners and order qualifiers.

Topic: What is Operations and Supply Chain Strategy?