Chapter 01 The Operations Function Answer Key

**Multiple-Choice Questions**

1. Why is operations management a more encompassing term than production management?
A. Operations management is concerned with multiple products and services.
**B.** Operations management refers to service as well as manufacturing organizations.
C. Operations management is broader including the financing and marketing functions.
D. Operations management makes use of the tools of quantitative analysis and computer systems.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Production management was changed to operations management to include services.*

2. Which of the following functions is responsible for the actual movement of goods and/or services across organizations?
**A.** Logistics
B. Operations
C. Purchasing
D. None of these

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Logistics is responsible for the movement of goods / services.*

3. Approximately what percentage of the American workforce works in service industries?
A. 20%
B. 40%
**C.** 80%
D. 90%

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: The U.S. Census reports more than 80% of the workforce is employed in services.*

4. The five decision areas in operations management are
A. planning, technology, inventory, control, and services.
**B.** process, quality, capacity, inventory, and supply chain.
C. process, quality, technology, capacity, and production.
D. none of these.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Process, quality, capacity, inventory, and supply chain are the five decision areas.*

5. A productive process approach
A. views operations as a separate organizational function.
**B.** must provide feedback information for control of process inputs and technology.
C. is of limited use in service organizations.
D. disregards human and social concerns.

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 3 Hard
AACSB: Reflective thinking
Bloom's: Understand
Feedback: The model of operations as a productive system includes a feedback loop.*

6. Capacity decisions
**A.** include staffing and scheduling.
B. include inventory control.
C. include defining product specifications.
D. are none of these.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Capacity decisions include staffing levels and scheduling, but not inventory or specifications.*

7. Inventory decisions involve
A. determining what to order, how much to order, and when to order.
B. tracking the flow of materials.
C. managing the finished goods inventories.
**D.** all of these.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Ordering decisions, finished goods inventory decisions, and inventory tracking are all included in the inventory decision area.*

8. Challenges facing operations and supply chain managers signify that
A. more emphasis should be placed on manufacturing than on service industries.
**B.** every operation should be externally directed to meet the customers' requirements.
C. operations decisions should precede decisions in other functions in an organization.
D. to be competitive, strategies for operations should have a narrow focus such as consideration of the effects of industry changes only.

*LO: 1.5*

*Topic: Challenges Facing Operations and Supply Chain Managers*

*Difficulty: 3 Hard
AACSB: Reflective thinking
Bloom's: Understand
Feedback: A, C, and D are not correct; increasing need to meet customer requirements is a current challenge.*

9. The essence of operations management can be described by
A. process, capacity, and people.
**B.** decisions, function, and process.
C. planning, control, and organization.
D. integrated planning and control.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Operations decisions, operations as a function, and process orientation are the heart of operations.*

10. Which of the following is NOT a new challenge facing operations?
A. Globalization of operations
B. Responding to the voice of the customer
**C.** Quality teams
D. Environmental concerns

*LO: 1.5
Topic: Challenges Facing Operations and Supply Chain Managers
Difficulty: 3 Hard
AACSB: Reflective thinking
Bloom's: Understand
Feedback: A, B, and C are included, along with integration of decisions and services in the list of five challenges.*11. The three primary functions that exist in most business organizations are
A. operations, accounting, and finance.
B. operations, production, and finance.
C. production, marketing, and human resources.
**D.** operations, finance, and marketing.

 *LO: 1.3
Topic: Cross-Functional Decision Making
Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Operations, finance, and marketing are the core functions in most businesses.*

12. The three major functions of business organizations
A. are mutually exclusive.
B. function independently of each other.
**C.** interface with each other.
D. do not interface with each other.

*LO: 1.3
Topic: Cross-Functional Decision Making
Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Each core function must integrate decisions with each other.*

13. Which one of the following would NOT generally be classified under the heading of input in a university system?
A. Staff
B. Equipment
C. Facilities
D. Knowledge
**E.** Research

*LO: 1.4
Topic: Operations as a Process
Difficulty: 3 Hard
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Research would be an output of a university system.*

14. The five major decision responsibilities of operations management are
A. process, quality, capacity, sourcing, and human resources.
B. process, quality, human resources, logistics, and inventory.
C. quality, inventory, human resources, capacity, and supply chain.
**D.** process, capacity, quality, supply chain, and inventory.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The five decision areas are process, quality, capacity, inventory, and supply chain.*

15. Which of the following does NOT come under the process category of the operations decision framework?
A. Layout of the facility
B. Job design
C. The type of equipment and technology
**D.** Product or service inspection

*LO: 1.2*

*Topic: Operations Decisions
Difficulty: 3 Hard
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Inspection would be under the quality decision area.*

16. Supply chain management includes the integration of
A. suppliers.
B. manufacturers.
C. customers.
**D**. all of the above.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: SCM starts with raw material suppliers, includes the transformation process, and extends to ultimate customers, all integrated for highest performance.*

17. The supply chain extends from
A. supplier to manufacturing.
B. supplier to supplier.
C. dealer to customer.
**D.** supplier to customer.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management
Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: SCM starts with raw material suppliers, includes the transformation process, and extends to ultimate customers.*

18. Supply chain management includes all of the following EXCEPT
A. purchasing.
B. inventory control.
**C.** advertising.
D. customer service.

 *LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management
Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Advertising would likely fall under the definition of marketing, not supply chain.*

19.  A comprehensive decision-making framework for operations includes

**A.** consideration of other organizational functions.

B. consideration of operations in isolation of other functions.

C. suppliers but not customers.

D. customers but not suppliers.

*LO: 1.2*

*Topic: Operations Decisions
Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The decisions of well-managed operations are always integrated with the decisions of other functions.*

20. Common inputs to the operations transformation process include all of the following EXCEPT
A. raw materials.
B. energy.
C. capacity.
D. labor.
**E.** conversion processes.

*LO: 1.4*

*Topic: Operations Transformation System
Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The productive system includes all the inputs except conversion processes.*

21. The major decision responsibilities of the operations management function include all of the following EXCEPT

A. quality.

B. process.

C. capacity.

**D.** capability.

E. inventory.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The five decision areas are process, quality, capacity, inventory, and supply chain.*

22. The operations management function is especially important for all of the following reasons EXCEPT

A. its governance of the transformation process.

B. the integrative nature of business decision making.

**C.** decreasing order response time.

D. the responsibility for the quality of products and services produced.

E. the responsibility for managing the largest portion of a firm’s assets and people.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Managing order response time is not primary to operations, as the other responses are, but may be an objective under quality or process.*

23. Key elements/events that should be monitored in the firm’s external environment include all of the following EXCEPT

A. competitors.

B. political events.

C. economic events.

D. social trends.

**E.** All of these should be monitored.

*LO: 1.4*

*Topic: Operations as a Productive Process*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The external environment includes all of these elements.*

24. Contemporary challenges facing operations today include all of the following EXCEPT

**A**. scientific management.

B. integration with other functions.

C. environmental concerns.

D. advancing service operations.

E. globalization of operations.

*LO: 1.5*

*Topic: Challenges Facing Operations and Supply Chain Managers*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Scientific management is not a contemporary challenge, but is a significant element of operation’s history.*

25. Which of the following is NOT true regarding service and manufacturing operations?

A. Both can be viewed as transformation processes.

B. Both convert raw materials, energy, labor, and capital into valued outputs.

C. Both are managed by operations managers.

**D.** Both employ roughly 50% of the U.S. workforce.

*LO: 1.5*

*Topic: Challenges Facing Operations and Supply Chain Managers*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The U.S. Census reports more than 80% of the workforce is employed in services.*

26. Which of the following is NOT one of the primary professional societies for operation and supply chain managers?

A. APICS

B. ISM

C. ASQ

**D.** IMC

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: IMC is not one of the four primary organizations described.*

27. Which of the following is NOT true regarding the process view of operations?

A. Operations managers are responsible for the conversion process.

B. A sales office may be viewed as a production process.

C. It is a basis for analyzing operations across the entire supply chain.

**D.** All of the above are true.

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Services, such as sales offices, can be viewed as production processes.*

28. The focus of supply chain decisions is

**A.** sourcing and logistics.

B. capacity and inventory.

C. quality and process.

D. none of the above.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: The other four are primary decision areas along with supply chain.*

29. When a company employs statistical tools to reduce the likelihood of a product recall, this best represents what type of decision?

A. Process

**B.** Quality

C. Supply chain

D. Logistics

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: The use of statistical tools would fall under decisions related to quality.*

30. When a company develops a report card for evaluating its suppliers, this best represents what type of decision?

A. Process

B. Quality

**C.** Supply chain

D. Capacity

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Supply chain decisions include selecting methods for supplier evaluation.*

31. When a company upgrades its assembly line, this best represents what type of decision?

**A.** Process

B. Quality

C. Inventory

D. Supply chain

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: The choice of production process is a process decision.*

32. A company using a team of people from marketing, human resources, and operations to develop a new service offering is

**A.** practicing cross-functional decision making.

B. supporting functional silo development.

C. better off allowing marketing to design the new service.

D. none of the above.

*LO: 1.3*

*Topic: Cross-Functional Decision Making*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember*

*Feedback: Such decisions must be integrated and highly interactive.*

33. Operations decisions concerning the type of process selected are often made in conjunction with which of these functions?

A. Marketing

B. Finance

C. Human resources

**D.** All of the above

*LO: 1.3*

*Topic: Cross-Functional Decision Making*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Process decisions require interface with all primary functions.*

34. Operations decisions concerning inventory levels are often made with which of these functions?

A. Marketing

B. Finance

**C.** Marketing and finance

D. Marketing, finance, and information systems

*LO: 1.3*

*Topic: Cross-Functional Decision Making*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Both marketing and finance have vested interest in strategic inventory decisions.*

35. Pricing decisions typically require interface with which aspects of operations?

**A.** Quality, capacity, and inventory

B. Process, quality, and inventory

C. Process, inventory, and supply chain

D. Pricing decisions do not require interfacing with operations.

*LO: 1.3*

*Topic: Cross-Functional Decision Making*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Pricing, a marketing area, affects and is affected by quality, capacity, and inventory positions.*

36. Which of the following would NOT be considered an output of an airline flight operation?

A. Transportation from point A to point B

B. Flight safety

C. Satisfied customer

**D.** Seat assignment

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Seat assignment is a step in the process, not an output.*

37. Which of the following is NOT one of the important challenges facing operations and supply chain managers?

A. Service operations lagging behind manufacturing operations

B. Other functions (e.g., marketing, finance) being unwilling to share information

C. Finding suppliers with appropriate sustainability practices

**D.** Applying scientific management principles to increase efficiency

*LO: 1.5*

*Topic: Challenges Facing Operations and Supply Chain Managers*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Although scientific management is an important part of O/SC history, it is not a current challenge.*

38. Decision making using analytics is viewed as

A. prescriptive (use of mathematical models to optimize decisions).

B. predictive (use of data to predict what is likely to happen).

C. descriptive (use of data to summarize the present situation).

**D**. all of the above.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Analytics can be descriptive, predictive, or prescriptive in nature.*

39. Which of the following is NOT a typical application of analytics in operations and supply chain management?

A. Forecasting

B. Capacity and scheduling

C. Logistics and sourcing

**D.** All of the above are typical applications.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Additionally, quality control and inventory are also common applications.*

40. Which of the following statements is INCORRECT?

A. Marketing is typically responsible for generating demand for products.

**B.** Human resources is typically responsible for assuring the quality of products.

C. Operations is typically responsible for producing and delivering products and services.

D. Finance is typically responsible for acquiring and allocating capital.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management
Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Quality assurance is typically a responsibility of operations.*

41. Which of the following would NOT be considered an operations and supply chain position title?

A. Business metrics/analytics analyst

B. Continuous improvement lead

C. Commodity sourcing manager

**D.** All of the above would be considered operations and supply chain position titles.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Understand
Feedback: Positions related to any of the five decision areas are very likely to be considered operations and supply chain positions.*

**True/False Questions**

42. The *transformation* view of the operations function provides a unified approach for studying the manufacturing and service industries.
**TRUE**

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 2 Moderate
AACSB: Reflective thinking
Bloom's: Remember
Feedback: Viewing operations as a process is very useful in unifying seemingly different operations from different industries.*

43. The process view provides a basis for viewing an entire business as a system of interconnected processes.
**TRUE**

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 1 Easy
AACSB: Reflective thinking
Bloom's: Remember
Feedback: This makes it possible to analyze an organization and improve it from the process point of view*

**Essay Questions**

44. The operations definition emphasizes *decision*, *function,* and *process* elements of the organization. Briefly discuss the need to address these fundamental elements.

*LO: 1.1*

*Topic: Definition of Operations and Supply Chain Management
Difficulty: 2 Moderate
AACSB: Reflective thinking, written communication
Bloom's: Understand
Feedback: See below.*

The operations function is responsible for planning and controlling the production system and its interfaces with the organization and with the external environment. The operations definition emphasizes decision, functional relationships and process elements of an organization. The operations function is responsible for making decisions regarding process, quality, capacity and inventory choices, which are vital to any organization. The functional element of operations is responsible for supplying or developing the products or rendering the required services for the business. It also links the manufacturing/service operations to other functions such as marketing, finance, and so on. The process view provides a common ground for defining service and manufacturing operations as a transformation process for converting the right kind of inputs into outputs.
These elements are critical for successful functioning of any organization, and it is for these reasons one should address the three fundamental elements of operations.
(Refer to Section 1.2 to augment this answer.)

45. Identify the critical operations decision areas in an organization, and discuss the responsibilities of an operations manager while addressing these decisions.

*LO: 1.2*

*Topic: Operations Decisions*

*Difficulty: 2 Moderate
AACSB: Reflective thinking, written communication
Bloom's: Understand
Feedback: See below.*

The critical decision areas in an organization include
(a) *process.*
(b) *quality.*
(c) *capacity.*
(d) *inventory.*
(Refer to Section 1.4 in the textbook for a detailed explanation of these decision areas.)

46. What are the five inputs and two outputs of an operations transformation process?

*LO: 1.4*

*Topic: Operations as a Process*

*Difficulty: 1 Easy
AACSB: Reflective thinking, written communication
Bloom's: Remember
Feedback: See below.*

The five inputs include energy, materials, labor, capital, and information.
The two outputs include goods and services.
(Refer to Section 1.6 to augment this answer.)