

Managing Service and Manufacturing Operations

True / False Questions

1. The transformation process occurs only in companies that manufacture tangible goods.

True False
2. Production refers to all the activities involved in producing products, while operations refer to the physical process of transforming resources into goods and services.

True False
3. Outputs include labor, materials, energy, and money.

True False
4. The transformation process is at the heart of operations management.

True False
5. Operations management refers to those processes used in making both tangible and intangible products.

True False
6. The number of steps in the transformation process is always the same, no matter what the good or service.

True False
7. Transformation processes remain the same across all organizations that provide services.

True False
8. In a nonprofit organization like Habitat for Humanity, inputs such as money, materials, information, and volunteer time and labor are used to transform raw materials into homes for needy families.

True False

9. Unlike tangible goods, services are effectively actions or performances that must be directed toward the manufacturers who make them.

True False

10. Manufacturers and service providers differ in the nature and consumption of their output.

True False

11. Service providers are generally less labor-intensive because of the high degree of customization.

True False

12. Variations in demand, service requirements, and the intangibility of the product make measuring productivity more difficult for manufacturers.

True False

13. A company that uses a fixed-position layout is often called a project organization because it is involved in large, complex projects.

True False

14. Before making any product, a company first must determine what consumers want and then design a product to satisfy that want.

True False

15. Modular design reduces the cost of labor, but raises the cost of repair materials.

True False

16. Modular design does not allow products to be repaired quickly, thus increasing the cost of labor.

True False

17. Taxes are an important consideration when deciding where to locate a production facility.

True False

18. Intermittent organizations typically use the fixed-position layout.

True False

19. A planning system that schedules the precise quantity of materials needed for production is called a just-in-time system.

True False

20. The ISO 9000 is a series of international quality management standards for organizations.
- True False
21. Quality is a critical element of operations management.
- True False
22. The degree to which a good or service meets the demands and requirements of customers is called customer satisfaction.
- True False
23. Quality, as a critical element of operations management, can be difficult to determine.
- True False
24. Service businesses cannot incorporate quality standards.
- True False
25. Inspection reveals whether a product meets quality standards.
- True False

Multiple Choice Questions

26. If an employee is involved with transforming resources into goods and services, then he is in:
- A. marketing.
 - B. financing.
 - C. human resources.
 - D. operations management.
 - E. budgeting.
27. Irene is an employee associated with producing goods, services, and ideas that satisfy the needs of customers. Thus, she works most closely with:
- A. financing.
 - B. budgeting.
 - C. production.
 - D. human resources.
 - E. operations.

28. Operations management has the primary responsibility for:
- A. employing computer-assisted manufacturing (CAM) exclusively for all transformations.
 - B. transforming goods and services into resources.
 - C. creating products that satisfy customers.
 - D. developing only such products which are intangible.
 - E. converting outputs into inputs.
29. Which of the following is true of the transformation process?
- A. It is the development and administration of activities that transform resources into goods, services, and ideas.
 - B. It is the conversion of human, financial, and physical resources into goods, services, and ideas.
 - C. It involves the assigning of labor, energy, and money for the advertisement of services.
 - D. It is associated with the promotion and pricing of goods and services.
 - E. It deals with the distribution and logistics of products.
30. Viewed from the perspective of operations, the money used to purchase a carpenter's tools and the electricity used to run his power saw are:
- A. processes.
 - B. outputs.
 - C. stocks.
 - D. inputs.
 - E. maintenance costs.
31. Viewed from the perspective of operations, the furniture items produced by a carpenter are:
- A. variations.
 - B. inputs.
 - C. equipment.
 - D. outputs.
 - E. processes.
32. From the perspective of operations, food sold at a restaurant and services provided by a plumbing company are:
- A. processes.
 - B. inputs.
 - C. outputs.
 - D. stocks.
 - E. costs.

33. How do operations managers ensure quality and efficiency during the transformation process?
- A. They ensure that their products never use the modular design of transforming because this process increases the cost of labor.
 - B. They always employ computer-assisted manufacturing (CAM) technologies to guide and control the transformation processes.
 - C. They shift from material-requirements planning (MRP) to just-in-time (JIT) inventory management.
 - D. They keep the work cycling between two different batches of labor in order to track any loopholes.
 - E. They take feedback at various points in the transformation process and compare them to established standards.
34. Money, employees, time, and equipment are examples of an airline's _____ to the transformation process.
- A. outputs
 - B. intangibles
 - C. products
 - D. services
 - E. inputs
35. Which of the following is true of the transformation process?
- A. It does not occur in service companies.
 - B. It occurs in all organizations, regardless of what they produce or their objectives.
 - C. It occurs only in manufacturing companies because they use tangible inputs.
 - D. It excludes fund-raising and promoting a cause.
 - E. It is not a part of government agencies because they do not use machineries for mass production.
36. Which of the following is NOT a point of difference between service providers and manufacturers?
- A. Services are more labor-intensive.
 - B. Manufacturing has more uniform outputs.
 - C. Services do not undergo a transformation process.
 - D. Manufacturing productivity can be measured straightforwardly.
 - E. Service providers have less control over the variability of their inputs.

37. For most organizations, the ultimate objective is for produced outputs to be:
- A. easy to develop.
 - B. tangible, hard goods.
 - C. inexpensive.
 - D. worth more than the cost of inputs.
 - E. equal to the costs of input.
38. The nature of the service provider's product requires:
- A. fewer employee inputs.
 - B. a higher degree of customer contact.
 - C. delayed consumption.
 - D. more expensive inputs.
 - E. more standardization.
39. Actual performance of the service provider's product typically occurs:
- A. several days after purchase.
 - B. outside the service provider's facility.
 - C. at the point of consumption.
 - D. in the buyer's home.
 - E. before the point of consumption.
40. To receive a haircut, you generally have to go to a salon. This information reflects the _____.
- A. uniformity of inputs
 - B. uniformity of outputs
 - C. labor required
 - D. measurement of productivity
 - E. nature and consumption of output
41. The products of service providers tend to be more customized than those of manufacturers because:
- A. different customers have different needs.
 - B. the requirements of all customers are more or less the same.
 - C. technological innovations have reduced variability.
 - D. there is more capital required in service provision.
 - E. the specific needs of individual customers get incorporated.

42. The fact that a hairdresser gives each customer a different haircut relates to the difference between service providers and manufacturers in terms of:
- A. consumption of output.
 - B. uniformity of inputs.
 - C. labor required.
 - D. measurement of productivity.
 - E. uniformity of output.
43. When compared to service providers, the products of manufacturers are typically:
- A. more labor-intensive.
 - B. less uniform.
 - C. more difficult to store.
 - D. more standardized.
 - E. cheaper.
44. Compared to service providers, manufacturers generally:
- A. are more labor-intensive.
 - B. are more capital-intensive.
 - C. customize their outputs.
 - D. have difficulty measuring productivity.
 - E. produce intangible outputs.
45. Zedpro Computer Company is determining demand for its future products and how much consumers are willing to pay. For this, Zedpro should rely on:
- A. the economy.
 - B. marketing research.
 - C. its competitor's moves.
 - D. successful past experiences.
 - E. intuition.
46. As a manufacturing process, the term standardization means:
- A. ensuring that each product is sold at the same price.
 - B. that similar products, manufactured by different companies, all operate in the same manner.
 - C. making identical, interchangeable components or complete products.
 - D. making the exact product a particular customer needs or wants.
 - E. making an item in self-contained units that can be interchanged to create different products.

47. A primary reason for using standardization is to:
- A. reduce production costs.
 - B. increase consumer options.
 - C. reduce product quality.
 - D. increase variations.
 - E. foster creativity.
48. Building a computer so that the components can be installed in different configurations to meet customers' needs is a result of:
- A. flexible manufacturing.
 - B. modular design.
 - C. customization.
 - D. specialization.
 - E. varied engineering.
49. Facility location decisions are complex because:
- A. all customers want plants nearby.
 - B. transportation costs are excessively high.
 - C. speed of delivery is not very important.
 - D. proximity to market or community characteristics are not important factors.
 - E. the firm must live with it once the decision has been made and implemented.
50. A company that manufactures large products, such as houses or bridges, may require that all resources be brought to a central location during production. This type of facility layout is called:
- A. fixed-position layout.
 - B. product layout.
 - C. line layout.
 - D. central control layout.
 - E. assembly line layout.
51. A company performing large, complex tasks such as construction or exploration is called a(n):
- A. continuous manufacturing organization.
 - B. intermittent organization.
 - C. project organization.
 - D. exploration company.
 - E. survey company.

52. A metal fabrication plant with a cutting department, a drilling department, and a polishing department would likely use _____ layout.
- A. fixed-position
 - B. horizontal-position
 - C. process
 - D. geographical
 - E. customer-based
53. A hospital having an X-ray unit, an obstetrics unit, few emergency rooms, and other units would best be classified as a(n):
- A. intermittent organization.
 - B. project organization.
 - C. continuous manufacturing organization.
 - D. fixed organization.
 - E. assembly line organizations.
54. An organization that creates many products with similar characteristics, such as automobiles, television sets, or vacuum cleaners, would most likely be categorized as a(n):
- A. continuous manufacturing organization.
 - B. intermittent organization.
 - C. project organization.
 - D. process layout organization.
 - E. fixed-position organization.
55. Which of the following statements is true?
- A. Organizations can start greening their supply chains by increasing resource consumption and waste.
 - B. The adoption of 100 percent wind-powered electricity increases carbon emissions.
 - C. Aluminum cans can be recycled an infinite number of times.
 - D. It is mandatory for organizations to incorporate sustainability into their business models.
 - E. Balancing profitability and socially responsibility is impossible for corporate organizations.

56. Which of the following activities is NOT included in supply chain management?
- A. Getting products to customers
 - B. Obtaining and managing raw materials
 - C. Managing finished products
 - D. Packaging finished products
 - E. Researching and developing products
57. All activities involved in obtaining and managing raw materials and component parts, managing finished products, packaging them, and getting them to customers are part of:
- A. stock management.
 - B. supply chain management.
 - C. engineering.
 - D. finance.
 - E. strategic planning.
58. Within organizations, purchasing is also referred to as:
- A. consumption.
 - B. disposition.
 - C. acquisition.
 - D. procurement.
 - E. budgeting.
59. The buying of all materials needed by an organization is called:
- A. consumer behavior.
 - B. capital expenditure.
 - C. purchasing.
 - D. standardization.
 - E. just-in-time management.
60. The term _____ refers to all raw materials, components, completed or partially completed products, and pieces of equipment a firm uses.
- A. inventory
 - B. order quantities
 - C. production
 - D. raw materials inventory
 - E. intangibles

61. Materials that have been purchased to be used as inputs in making other products are included in:
- A. finished inventory.
 - B. partial inventory.
 - C. raw materials inventory.
 - D. supplier inventory.
 - E. component parts inventory.
62. The process of determining how many supplies and goods are needed, keeping track of quantities on hand, each item's location, and who is responsible for it is called:
- A. process layout.
 - B. product layout.
 - C. material-requirements planning.
 - D. inventory control.
 - E. continuous manufacturing control.
63. A model of inventory management that identifies the optimum number of items to order to minimize the costs of managing them is called the:
- A. just-in-time management model.
 - B. flexible scheduling model.
 - C. material requirements planning model.
 - D. economic order quantity model.
 - E. logistics model.
64. Minimizing inventory by providing an almost continuous flow of items from suppliers to the production facility is referred to as:
- A. just-in-time inventory management.
 - B. flexible scheduling.
 - C. material-requirements planning.
 - D. logistics.
 - E. the economic order quantity model.
65. A planning system that schedules the precise quantity of materials needed to make a product is called:
- A. just-in-time management.
 - B. material-requirements planning.
 - C. economic order quantities.
 - D. flexible scheduling.
 - E. cycle-time management.

66. One popular method of scheduling is the _____ which identifies all the major activities or events required to complete a project, arranges them in a sequence or path, determines the critical path, and estimates the time required for each event.
- A. computer-assisted manufacturing (CAM)
 - B. Program Evaluation and Review Technique (PERT)
 - C. Critical Path Method (CPM)
 - D. economic order quantity (EOQ) model
 - E. material-requirements planning (MRP)
67. The system in which management collects and analyzes information about the production process to pinpoint quality problems in the production system is called:
- A. total quality management.
 - B. statistical process control.
 - C. Program Evaluation and Review Technique (PERT).
 - D. operations control.
 - E. production control.
68. Which of the following is true about quality?
- A. It is a concern only for manufacturing companies.
 - B. It is a concern only for service providers.
 - C. It always indicates the price charged for a product.
 - D. It is a critical element of operations management.
 - E. Its definition should vary from employee to employee.
69. The degree to which a good or service meets the demands and requirements of customers is called:
- A. efficiency.
 - B. productivity.
 - C. quality.
 - D. effectiveness.
 - E. customer satisfaction.
70. It is especially difficult to measure quality characteristics when:
- A. a firm uses ISO 9000.
 - B. a firm has a total quality management program.
 - C. the product is a good.
 - D. the product is a service.
 - E. a firm uses statistical process control.

71. _____ refers to the processes an organization uses to maintain its established quality standards.
- A. Quality control
 - B. Implementation
 - C. Continuous manufacturing
 - D. Fixed-position layout
 - E. Logistics
72. _____ is a philosophy that uniform commitment to quality in all areas of an organization will promote a culture that meets customers' perceptions of quality.
- A. The marketing concept
 - B. Total quality manufacturing
 - C. ISO 9000
 - D. Statistical process control
 - E. Total quality management
73. The first step in quality control for any organization is:
- A. undertaking inspections.
 - B. establishing standards.
 - C. sampling products.
 - D. implementing services.
 - E. initiating corrections.
74. Sampling is likely to be used:
- A. when inspection tests are destructive.
 - B. when every product must be tested because of human life and safety.
 - C. to assess the quality of services.
 - D. sampling is the most expensive option.
 - E. testing takes a few minutes to complete.
75. It is desirable to test only a sample of the product in all of the following circumstances EXCEPT when:
- A. inspection procedures are expensive.
 - B. elaborate testing equipment is required.
 - C. testing takes a significant number of hours to complete.
 - D. the product is destroyed by sampling.
 - E. sampling does not destroy the product.

Essay Questions

76. What is meant by the term operations management?

77. Distinguish between the concepts of production and operations in the context of operations management with a suitable example.

78. Describe the transformation process, from inputs to outputs, for a good or service of your choice.

79. Discuss the challenges faced by a service organization during the management of its operations.

80. Why do service providers tend to be more labor-intensive than manufacturers?

81. State the differences that exist between manufacturers and service providers.

82. Discuss the process of standardization in manufacturing various products.

83. Discuss the process of modular design in manufacturing various products.

84. Discuss the process of customization in manufacturing various products.

85. Richard and his friend Jason intend to establish their own ventures. While Richard intends to establish a manufacturing company, Jason intends to establish a multi-specialty hospital. In the context of planning the facilities for their ventures, discuss the types of facility layout that should be implemented by both, prior to the establishment of their ventures.

86. Janet is an entrepreneur who owns an automobile manufacturing company. In the context of the types of organizations with respect to its facility layout, discuss the type of organization that is owned by Janet.

87. How have computers and robots influenced the operations of business?

88. What is meant by the term sustainability? How does this concept pertain to manufacturers?

89. Define the term inventory. Discuss the three kinds of inventory.

90. What is the economic order quantity model?

91. List the advantages and disadvantages of the outsourcing process.

92. What considerations should be taken by managers after materials have been procured and their use has been determined?

93. What is meant by the philosophy of total quality management (TQM)?

94. What is meant by the concept of quality control?

95. Discuss the ISO 14000 as proposed by the International Organization for Standardization (ISO).

