

Chapter 8 Managing Service and Manufacturing Operations

True/False Questions

1) Production refers to all the activities and processes used in making both tangible and intangible products.

True False

2) Labor, money, materials, and energy are all inputs in the transformation process.

True False

3) Tangible goods are effectively actions or performances that must be directed toward the consumers who use them.

True False

4) Cho is a personal assistant for working moms who need extra help with things like grocery shopping, picking up dry cleaning, and arranging lawn care. Cho running a service business.

True False

5) A challenge related to service operations is that the output is generally tangible.

True False

6) Service providers are generally more labor-intensive than manufacturers because of the high level of customization.

True False

7) Most companies use social media in the product development process.

True False

8) Modular design, an operations process for manufacturing products, does not allow products to be repaired quickly, thus increasing the cost of labor.

True False

9) One criterion that influences companies on location decisions is the fact that state governments are willing to forgo some tax revenue in exchange for job growth.

True False

10) Diana's summer job was in a factory that made dog food. She was stationed on an assembly line and filled boxes with Prime Variety. This is an example of a product layout.

True False

11) The United States is by far the largest market for industrial robots.

True False

12) Supply chain management and logistics are the same thing.

True False

13) Material-requirements planning can be, and often is, used in conjunction with just-in-time inventory management.

True False

14) Scheduling is the sequence of operations through which the product must pass.

True False

15) Service businesses are too varied to incorporate quality standards.

True False

16) Total quality management (TQM) involves increasing employee participation in quality control.

17) ISO 14000 is a comprehensive set of environmental standards that help organizations committed to sustainability find acceptable global solutions to problems.

True False

Multiple Choice Questions

18) If an employee's primary function in an organization is transforming resources into goods and services, then he or she is involved in

- A) staffing.
- B) financing.
- C) customer relationship management.
- D) operations management.
- E) crowdsourcing.

19) Irene is a manager at an automobile dealership. She manages the logistics, quality, and productivity of the service department. She takes her role in the service department very seriously because service is an important part of the total product for the dealership's customers.

Thus, Irene is a(n)

- A) finance manager.
- B) sales manager.
- C) marketing manager.
- D) human-resource manager.
- E) operations manager.

20) Which of the following accurately describes the difference between the terms "operations" and "production"?

- A) Operations is the first step in manufacturing, whereas production is the last step.
- B) Operations is simply an analysis of inputs and outputs, whereas production includes a wide range of organizational activities and situations.
- C) Operations includes processes used in the making of both tangible and intangible products, whereas production is related only to tangible products.
- D) Operations focuses solely on quality, whereas the primary focus of production is productivity.
- E) Operations is restricted to small businesses, whereas production occurs in both small and large businesses.

21) Monique is the operations manager of a chain of hair salons in upscale urban neighborhoods. Customers in these neighborhoods expect high quality services and products, and Monique is struggling to use the salon's resources efficiently and effectively to provide the level of quality the areas' customers demand. What will most likely happen if Monique can't find a way to meet customers' demands for quality?

- A) The hair salons will be forced to move to a less demanding neighborhood.
- B) The hair salons will be taken over by competitors in the area.
- C) The hair salons will stay in business, and customers will adapt to their services and products.
- D) The hair salons will be converted into a different type of business that can succeed in this area.
- E) The hair salons will go out of business.

22) All of the following are true of the evolution of operations EXCEPT

- A) historically, operations management was called production or manufacturing because it was viewed as the manufacture of physical goods.
- B) the operations function is primarily viewed as an analysis of inputs and outputs.
- C) the operations function is viewed as a whole rather than simply as an analysis of inputs and outputs.
- D) the change from "production" to "operations" recognizes the importance of organizations that provide services and ideas.
- E) historically, the focus of operations was on methods and techniques required to operate a factory efficiently.

23) Which of the following can be described as production?

- A) the services provided by a financial advisor
- B) the manufacturing of cars in an automobile company

- C) the surgeries conducted by a doctor
- D) the legal advice provided by a lawyer for a fee
- E) receiving a pedicure at a spa

24) Which of the following is true of the transformation process in operations management?

- A) It is a process of replacing quality with productivity when manufacturing products.
- B) It is the conversion of resources, such as labor, money, materials, and energy, into goods, services, or ideas.
- C) It is efficient only when inputs are used in large quantities to produce small quantities of output.
- D) It is associated with the marketing and selling of both inputs and outputs to customers.
- E) It is a process of initiating corrective action when the actual output is more than the desired output.

25) Glen is a carpenter who performs home repairs and improvements for his customers. From the perspective of operations, the money he uses to purchase his tools and the electricity he uses to run his power saw are

- A) processes.
- B) outputs.
- C) stocks.
- D) inputs.
- E) inventories.

26) Aisha and her father have been building rustic furniture for family and friends since she was in high school. As an adult, Aisha decided to start her own rustic furniture company. From the perspective of operations, the beds, tables, chairs, and dressers she builds are

- A) intangible resources.
- B) inputs.
- C) equipment.
- D) outputs.
- E) processes.

27) Jamal is the head chef at an Indian restaurant. He imports many of his ingredients from India and prepares them from family recipes that have been passed down for generations. From the perspective of operations, the food he sells to customers and the authentic Indian atmosphere he provides are

- A) component parts.
- B) inputs.
- C) outputs.
- D) transformations.
- E) inventories.

28) Gina is a makeup artist who works in a salon and travels to provide her services to her clients at weddings and other events. As part of her services, she gives her clients lipstick, blotting sheets, and face powder, so they can touch up their makeup throughout the event. Her biggest expenses are the cost of the items she gives to clients, the cost of keeping her makeup kit stocked

with a variety of products, travel expenses to get to the events, and her time. Which of the following are considered an input?

- A) the lipstick, blotting sheets, and face powder she gives to clients
- B) the makeup services she provides in the salon
- C) the makeup services she provides at events
- D) her time and money
- E) her creative application of makeup to make her clients look perfect for any event

29) Travis works for a business that manufactures industrial metal clocks. All of the following are processes the clock maker must pass the inputs through before they are turned into the final outputs, clocks for his customers, EXCEPT

- A) cutting metal sheets into circles for the clock center, numbers, and clock hands.
- B) welding the metal pieces together to form the clock's basic design.
- C) selling the finished clocks to customers.
- D) heating and shaping repurposed metal into the clock frame.
- E) applying metal sealant to keep the metal from rusting or oxidizing.

30) All of the following are processes through which an airline transforms inputs, such as employees, time, money, and equipment, into outputs EXCEPT

- A) maintaining equipment.
- B) booking flights.
- C) flying airplanes.
- D) training crews.
- E) transporting passengers.

31) In the context of operations management, which of the following is true of the transformation process?

- A) It focuses on producing outputs that are worth less than the combined costs of the inputs.
- 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 involves replacing quality with productivity when manufacturing goods.
- E) It includes the same methods and number of steps in all organizations.

32) What is a similarity between goods and services?

- A) Both are equally labor-intensive.
- B) Both produce uniform outputs.
- C) Both undergo a transformation process.
- D) Both are equally tangible.
- E) Both have equal control over the variability of their inputs.

33) For most organizations, the ultimate objective is

- A) to replace quality with productivity in the transformation process.
- B) to create intangible outputs using tangible inputs.
- C) for operations to be replaced by production and manufacturing.
- D) for the produced outputs to be worth more than the cost of inputs.
- E) to completely eliminate the transformation process in operations management.

34) Food for Families, a nonprofit organization, uses inputs such as money, groceries, volunteer time, and labor to transform food into hot, prepared meals for needy families. In this setting, which of the following is a transformation process?

- A) paying rent for a cooking facility
- B) traveling abroad to find less expensive ingredients
- C) tasting the meals to make sure they are satisfactory
- D) giving families raw ingredients and expecting them to prepare meals themselves
- E) fundraising and promoting the cause to gain new volunteers and food donations

35) Unlike tangible goods, services are effectively

- A) the actions that produce tangible and intangible goods.
- B) raw materials that can be transformed into goods.
- C) produced outputs that are worth more than the combined costs of the inputs.
- D) actions or performances that must be directed toward the consumers who use them.
- E) an organization's activities that are not for profit.

36) Which of the following is a characteristic feature of service businesses?

- A) They are not labor-intensive.
- B) The service experience remains constant each time.
- C) They cannot incorporate quality standards.
- D) The resultant output is mostly tangible.
- E) The degree of variation of inputs and outputs is high.

37) At Renaissance Regalia Restaurant, diners expect an authentic Renaissance dining experience. The wait staff are expected to stay in character and dress in authentic Renaissance clothing, the walls of the restaurant are covered with Renaissance art, and as diners eat Renaissance-era foods, they are entertained by Renaissance musicians and performers. What type of service does this restaurant provide?

- A) low contact
- B) high contact
- C) high tech
- D) nonperishable
- E) tangible

38) Service organizations must build their operations around good execution, which comes from all of the following EXCEPT

- A) providing services that can be saved, stored, resold, or returned.
- B) hiring and training excellent employees.
- C) customizing services.
- D) developing flexible systems.
- E) maintaining adjustable capacity to deal with fluctuating demand.

39) Christopher runs an arena that hosts sporting and music events. When booking these events, he must consider how many people would be interested in buying tickets. Based on the demand, he must set his ticket prices at the appropriate level. Which of the following is a challenge

associated with providing this type of service?

- A) It is difficult to determine the appropriate level of customer contact required when providing such a service.
- B) With services like this, it is difficult to ensure that the produced outputs will be worth more than the combined costs of the inputs.
- C) It is difficult to accurately estimate the demand to match the right supply of a service.
- D) When providing this type of service, it is difficult to balance in-person and online ticket sales.
- E) It is difficult to convince customers to spend money on tangible services like this.

40) Actual performance of a service provider's product typically occurs

- A) several days after the 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.

41) All Better Hospital has studied the manufacturing processes and quality control mechanisms applied in the automotive industry in an effort to improve its service quality. By analyzing work processes to find unnecessary steps to eliminate and using teams to identify and address problems as soon as they occur, this hospital could do all of the following EXCEPT

- A) increase inventories of wheelchairs.
- B) slash patient waiting times.
- C) ready operating rooms sooner.
- D) move patients through their hospital visit more quickly.
- E) move patients through their hospital visit with fewer errors.

42) Service experience tends to vary each time because

- A) services are not labor-intensive.
- B) of the tangible element inherent in delivering services.
- C) services can be easily separated from the point of consumption.
- D) services are less customized than tangible products.
- E) of the human element inherent in providing services.

43) 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) service providers have limited contact with customers.

44) Stephen is a hairdresser who gives haircuts to two customers in the same day. The haircut he gives to the first customer is not exactly the same as the haircut he gives to the second customer. This relates to the difference between service providers and manufacturers in terms of

- A) consumption of output.
- B) tangibility of inputs.

- C) labor required.
- D) measurement of productivity.
- E) uniformity of output.

45) When compared to service providers, the products of manufacturers are typically

- A) more labor-intensive.
- B) less standardized.
- C) more difficult to store.
- D) more uniform.
- E) less tangible.

46) When customers go to Style and Trim Salon, they ask for specific hair styles or cuts that incorporate their specific desires. In comparison, the manufacturer that produces Headstrong Shampoo has more control over the amount of variability of the resources it uses to create its shampoos. Which of the following differences between manufacturers and service providers does this scenario relate to?

- A) consumption of output
- B) labor required
- C) measurement of productivity
- D) uniformity of output
- E) uniformity of inputs

47) Compared to service providers, manufacturers are generally more

- A) labor-intensive.
- B) capital-intensive.
- C) capable of customizing their products.
- D) variable in their inputs and outputs.
- E) vulnerable to the perishability of their output.

48) Tree Moon Hospitality Inc. has a chain of reputed hotels and resorts across the globe. First Care Inc. is a pharmaceutical company known for its breakthrough, life-saving drugs. How will the two businesses differ from each other?

- A) Tree Moon Hospitality Inc. will be more capable of customizing its products when compared to First Care Inc.
- B) Tree Moon Hospitality Inc. will be able to keep its output standardized, whereas First Care Inc. will not.
- C) Tree Moon Hospitality Inc. will have less contact with its customers when compared to First Care Inc.
- D) Tree Moon Hospitality Inc. will be able to incorporate quality standards, whereas First Care Inc. will not.
- E) Tree Moon Hospitality Inc., unlike First Care Inc., will not produce its output at the point of consumption.

49) Lloyd is a computer technician who his company sends to customers' homes to fix their broken computers. He usually fixes between 10 and 20 computers per day, so he interacts with a

lot of customers with a variety of computer issues. Lloyd's job is

- A) capital-intensive.
- B) standardized.
- C) labor-intensive.
- D) uniform in terms of inputs.
- E) uniform in terms of output.

50) Service providers are often more limited than manufacturers in selecting work methods, assigning jobs, scheduling work, and exercising control over operations because

- A) services are not labor-intensive.
- B) services are highly standardized.
- C) services cannot be customized.
- D) of their tangibility.
- E) of their need for customer contact.

51) Which of the following is an accurate description of a difference between manufacturers and service providers?

- A) Service providers have more control over the amount of variability of the resources they use than manufacturers do.
- B) For service providers, measuring productivity is fairly straightforward, whereas for manufacturers, measuring productivity is more complicated.
- C) Manufacturers can separate the production of a product from its actual use, whereas the service dimension requires closer contact with the consumer.
- D) The products of manufacturers tend to be more customized than those of service providers.
- E) Manufacturers make more contact with their customers when compared to service providers.

52) Which of the following is true of services and their providers?

- A) Service providers are more capital-intensive than labor-intensive.
- B) The quality of the service experience is controlled by a service contact employee.
- C) Service experience is usually constant, irrespective of the person delivering or receiving it.
- D) Services can be provided in an isolated environment, away from customers.
- E) The degree of variation of inputs and outputs is negligible for services.

53) Which of the following scenarios reflects the capital-intensive nature of a manufacturer?

- A) A lawyer provides varying services that include consulting clients on legal documents, preparing legal documents for clients, and representing clients in court.
- B) An electrician goes into customers' homes and fixes a variety of expensive electrical issues.
- C) EduPub provides temporary support personnel to help new customers use its products.
- D) Floors for Less offers customers many flooring options, and their prices include installation.
- E) Coffee at Home mass produces coffee makers with multiple settings, so customers can choose whether they want to brew a cup, two cups, or an entire pot using the same machine.

54) The output of service providers must be consumed immediately, and only a few services can be saved, stored, resold, or returned. Which characteristic feature of services does this best illustrate?

- A) low degree of customer contact

- B) high degree of standardization of outputs
- C) tangibility of outputs
- D) perishability of outputs
- E) uniformity of inputs

55) ProCar Inc. is a reputed automobile manufacturing company, and Coral Holidays Inc. is an established chain of travel agencies. How will the two businesses differ from each other?

- A) While Coral Holidays Inc. will be able to incorporate quality standards in its business, ProCar Inc. will not.
- B) Measuring productivity will be fairly straightforward for ProCar Inc. when compared to Coral Holidays Inc.
- C) Standardizing output will be easier for Coral Holidays Inc. when compared to ProCar Inc.
- D) ProCar Inc. will face a higher degree of variation of inputs and outputs when compared to Coral Holidays Inc.
- E) ProCar Inc. will make more customer contact than Coral Holidays Inc.

56) For manufacturers, measuring productivity is fairly straightforward because

- A) of the tangibility of their output.
- B) they are labor-intensive.
- C) their output lacks uniformity.
- D) of the variability of their inputs.
- E) of their high contact with customers.

57) Maple Health Care, a chain of private hospitals and laboratories, finds it difficult to measure the productivity of its staff. Which of the following reasons can be attributed to this problem of service providers?

- A) Services cannot be delivered at the point of consumption.
- B) Services have a high degree of uniformity.
- C) Service requirements vary from job to job.
- D) Service experience is tangible.
- E) Services require minimal customer contact.

58) Ultimately, what classifies a company as either a manufacturer or a service provider?

- A) the way the company combines tangible and intangible qualities
- B) the level of tangibility of its principal product
- C) the amount of labor required to produce the company's products
- D) the ability of the company to satisfy its customers
- E) the perishability of the company's products

59) Zedpro Computer Company is determining the demand for a new product and how much consumers are willing to pay for it. For this, Zedpro would most likely rely on

- A) case studies.
- B) marketing research.
- C) trial and error.
- D) successful past experiences.

E) intuition.

60) Go Mobile and Apps for All partnered together to develop improved applications to help people use their mobile devices to complete more of their daily functions, including scheduling, budgeting, and networking. By joining together, these companies can

- A) reduce the time it takes to develop new products.
- B) dedicate more time to developing new products.
- C) afford to spend more money to develop new products.
- D) dedicate more people, working more hours, to develop new products.
- E) develop new products with almost no planning.

61) From the perspective of manufacturers, standardization means

- A) ensuring that each product is sold at the same price.
- B) ensuring that one's product has the exact same features as that of a competitor.
- C) making identical, interchangeable components or complete products.
- D) making the exact product a particular customer needs or wants.
- E) meeting the benchmark set by a market leader.

62) Better Stuff Inc. is a contract manufacturer of 32GB USB flash drives. All USB devices sold under the brand name Better Stuff are identical to each other and are of the same quality. This is an example of

- A) flexible manufacturing.
- B) customization.
- C) standardization.
- D) benchmarking.
- E) lean manufacturing.

63) A primary reason for using standardization is to

- A) reduce production costs.
- B) increase the choices available for customers.
- C) reduce product quality.
- D) support variability of the resources used.
- E) foster creativity.

64) Kenneth is a mechanic who fixes Honda cars. He orders parts directly from Honda because its parts are created specifically to fit and function properly in its vehicles. Which advantage of standardization does this scenario illustrate?

- A) The customer gets exactly what he or she wants.
- B) Kenneth can charge more for a standardized product than a custom-designed product.
- C) Standardized products function uniformly all the time, so customers get a product that meets their expectations.
- D) Customers have more choices available to them.
- E) Customers can mix and match components for a customized design.

65) Standardization becomes complex on a global scale because

- A) different countries have different standards for quality.

- B) customer needs are same across the globe.
- C) standardization slows down production.
- D) standardization does not support mass manufacturing.
- E) standardization increases production costs.

66) Custom Computers builds their computers so that the components can be installed in different configurations to meet certain needs of a customer. This is an example of

- A) flexible manufacturing.
- B) modular design.
- C) lean manufacturing.
- D) standardization.
- E) reverse engineering.

67) Which of the following is true of modular design as an operations process?

- A) The failure of any portion of a modular component does not require replacing the entire component.
- B) Automobile manufacturers avoid the use of modular design in the production process.
- C) It increases the time to repair products, thus raising the cost of labor.
- D) It raises the cost of repair materials because the component itself is expensive.
- E) It is the highest form of customization that can be provided to customers.

68) Claude and Phillippe want to buy their first home together. Since they travel a lot and they want to be able to take their home with them, they are looking for a mobile, tiny house. In their search, they find a manufacturer who builds tiny houses using modular design. All of the following are benefits of building their home this way EXCEPT

- A) they can mix and match components to get exactly the home they want.
- B) their home will cost less than a conventionally built house.
- C) their future home repairs can be done quickly, reducing the cost of labor.
- D) if any portion of a modular component of their home fails, they can repair the component instead of needing to replace it.
- E) if they decide to change their home in the future, they can add new modules.

69) _____ is making products to meet a particular customer's needs or wants.

- A) Customization
- B) Standardization
- C) Mass production
- D) Crowdsourcing
- E) Benchmarking

70) Daria's Diamonds Inc. is a premium jeweler. Its clientele includes movie stars, politicians, businessmen, and popular socialites. Everything is made to meet the specific requirements of the clients, and no two jewelry pieces produced by this company have ever been identical. This is an example of

- A) customization.
- B) standardization.

- C) mass production.
- D) crowdsourcing.
- E) benchmarking.

71) Axel Automobile Company allows buyers to select the color, interiors, and features of their cars based on their individual preferences. Though most parts of the cars can be altered to meet the buyers' specifications, their structural body remains the same. This is an example of

- A) lean manufacturing.
- B) standardization.
- C) mass customization.
- D) crowdsourcing.
- E) benchmarking.

72) All of the following are examples of customized products EXCEPT

- A) television sets.
- B) repair services.
- C) computer software.
- D) bridges.
- E) furniture.

73) A manufacturing unit of Badger Brothers Brewery, a commercial brewery, can produce a maximum of 20,000 cans of beer per day. This refers to the _____ of the manufacturing unit.

- A) agility
- B) variability
- C) utility
- D) perishability
- E) capacity

74) A hospital can effectively handle a maximum number of 300 patients at any one particular time. This is referred to as its

- A) agility.
- B) variability.
- C) capacity.
- D) perishability.
- E) utility.

75) The capacity of a restaurant would be the

- A) average number of customers that visit the restaurant on weekends.
- B) total number of customers who have visited the restaurant since its establishment.
- C) average number of employees who work in the restaurant on a normal day.
- D) maximum number of customers who can be effectively served at any one particular time.
- E) minimum operating cost of the restaurant during a workweek.

76) Facility location decisions are significant for an organization because

- A) of the customers' preference to have production facilities located nearby.
- B) most customer contact occurs in manufacturing facilities.

- C) speed of delivery is not very important.
- D) proximity to market or community characteristics are not important factors.
- E) of the high costs involved with the decisions.

77) Trent owns a chain of Mexican restaurants, and he wants to open a new location. All of the following are factors he should consider EXCEPT

- A) access to publicity.
- B) proximity to market.
- C) climatic influences.
- D) taxes and inducements.
- E) community characteristics.

78) Happy Homes, a manufacturer that builds prefabricated houses, brings all the construction resources to a central location during production. This type of a facility layout is called _____ layout.

- A) a fixed-position
- B) a product
- C) a line
- D) a web
- E) an assembly-line

79) Striking Oil, an oil drilling plant, uses a fixed-position layout because it is involved in large, complex projects, exploring the ground for oil deposits. As a result, this company may be called _____ organization.

- A) a continuous-manufacturing
- B) an intermittent
- C) a project
- D) a contract-manufacturing
- E) a product

80) Which of the following is true of project organizations?

- A) They produce a standardized product.
- B) They produce a large number of units.
- C) They have low production costs per unit.
- D) They rely on highly skilled labor.
- E) They generally use product layouts.

81) A metal-fabrication plant with a cutting department, a drilling department, and a polishing department is using a _____ layout to organize its facility.

- A) fixed-position
- B) project
- C) process
- D) geographical
- E) customer-based

82) Ocean-Side Furnishings, a company that produces furniture inspired by the beach, uses a

process layout with several departments that group related processes. All of the following could be process departments in this company EXCEPT _____ department.

- A) a pattern-making
- B) a painting
- C) an assembling
- D) a cutting
- E) a marketing

83) A hospital that has an X-ray unit, an obstetrics unit, a few emergency rooms, and other units would best be classified as _____ organization.

- A) an intermittent
- B) a project
- C) a continuous manufacturing
- D) a fixed
- E) an assembly-line

84) Creative Advertising Solutions creates flyers, newspaper ads, and television ads to meet customers' specifications. Also, if a customer wants items to hand out to potential clients, Creative Advertising Solutions creates business cards and small products, such as matchbooks, letter openers, and key chains, featuring the customer's company name and contact information. It produces relatively few units of each product. What type of organization is Creative Advertising Solutions?

- A) a fixed organization
- B) a project organization
- C) an intermittent organization
- D) a process organization
- E) a service organization

85) An organization that creates many products with similar characteristics using assembly lines would most likely be categorized as _____ organization.

- A) a continuous manufacturing
- B) an intermittent
- C) a project
- D) a contract manufacturing
- E) a fixed-position

86) BP Goods Inc. is a contract manufacturer of laptops for a reputed consumer-electronics company. It uses a facility layout in which the workers remain in one location, and the laptops move from one worker to another. Each person in turn performs his or her required tasks. BP Goods Inc. is using a _____ layout.

- A) product
- B) process
- C) project
- D) web
- E) fixed-position

87) Which of the following is a defining characteristic of continuous manufacturing organizations using a product layout?

- A) They make a unique product.
- B) They have an extremely high unit cost of production.
- C) They produce highly customized products.
- D) They produce a large number of units.
- E) They do not use assembly lines.

88) _____ employs specialized computer systems to actually guide and control the transformation process of inputs into outputs.

- A) Computer-assisted design (CAD)
- B) A transaction processing system
- C) Computer-assisted manufacturing (CAM)
- D) The in-basket technique
- E) A turnkey project

89) _____ is a complete system that designs products, manages machines and materials, and controls the operations function in the transformation process.

- A) Computer-assisted design (CAD)
- B) Computer-integrated manufacturing (CIM)
- C) Computer-assisted manufacturing (CAM)
- D) Flexible manufacturing
- E) Crowdsourcing

90) Gunther owns a house construction company called Stylish Model Homes. To help his customers visualize the types of houses he can build for them, he has designed five different house models on the computer, using 3D printing to develop 3D paper models. What type of technology would Gunther use to develop these 3D models?

- A) computer-assisted manufacturing
- B) flexible manufacturing
- C) computer-integrated manufacturing
- D) computer-assisted design
- E) drones

91) A large nuclear power plant would be likely to use _____ in the transformation process because having humans perform these tasks would put them at risk.

- A) computers
- B) computer software
- C) 3D models
- D) drones
- E) robots

92) Which of the following best illustrates an organization's efforts toward sustainability through its manufacturing and operations systems?

- A) creating genetically modified foods
- B) adopting 100-percent wind-powered electricity
- C) increasing the use of fossil fuels for manufacturing processes
- D) clearing forests to set up a manufacturing unit
- E) discharging industrial effluents directly into water bodies

93) Green Plumbing is dedicated to green technology and sustainability. As a result, it produces toilets and sinks that are designed to conserve water. Doing so not only protects the environment, but can also

- A) decrease customer loyalty.
- B) hurt the firm's reputation.
- C) cause stakeholders to protest.
- D) lead to improved profits.
- E) hurt the company's profits.

94) 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) value chain management.
- B) supply chain management.
- C) reverse engineering.
- D) operations control.
- E) benchmarking.

95) When a furniture manufacturer buys the lumber and other raw materials, machines and equipment, manufacturing supplies, and office supplies needed to build its furniture pieces, this is called

- A) consumption.
- B) leveraged purchase.
- C) acquisition.
- D) procurement.
- E) crowdsourcing.

96) The term _____ refers to all raw materials, components, completed or partially completed products, and pieces of equipment a firm uses.

- A) inventory
- B) capital reserve
- C) input
- D) share
- E) intangible

97) Materials that have been purchased to be used as inputs in making other products are included in _____ inventory.

- A) finished products
- B) partial
- C) raw materials
- D) supplier

E) work-in-process

98) Mason Structures Inc. purchases cement, steel rods, and wooden panels to use in the construction of buildings, houses, and bridges. These inputs are considered as _____ inventory for a construction business.

- A) finished
- B) partial
- C) work-in-process
- D) supplier
- E) raw materials

99) Which of the following is an example of finished-goods inventory for an apparel company?

- A) the clothes for sale in the company's retail store
- B) the buttons to be used on pants
- C) a batch of pants that are in the stitching process
- D) a bottle of fabric dye in the company's factory
- E) the thread used for stitching

100) Which of the following is an example of work-in-process inventory for an automobile company?

- A) cars for sale in one of the company's outlets
- B) cars that are in the initial stages of the assembly line
- C) tires in the company's warehouse
- D) nuts and bolts used in the cars
- E) windshields used in the cars

101) The process of determining how many supplies and goods are needed and keeping track of quantities on hand, each item's location, and who is responsible for it within an organization is called

- A) facility planning.
- B) benchmarking.
- C) succession planning.
- D) inventory control.
- E) affirmative action.

102) Carol is an inventory manager for a shoe store. She must determine how many pairs of each style of shoes, boots, and sandals to hold in inventory. All of the following are variables she should consider EXCEPT

- A) her shoe style preferences.
- B) the usage rate of the shoes, boots, and sandals.
- C) the cost of maintaining the shoes, boots, and sandals in inventory.
- D) future costs of inventory.
- E) the cost of the shoes, boots, and sandals themselves.

103) A model of inventory management that identifies the optimum number of items to order to minimize the costs of managing them is called the _____ model.

- A) just-in-time management
- B) flexible scheduling
- C) cost-plus
- D) economic order quantity
- E) value chain

104) 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) a continuous manufacturing system.
- D) contract manufacturing.
- E) crowdsourcing.

105) Zinc Inc., a consumer electronics company, does not store any of its materials in the warehouse. Instead, the company's procurement department orders small quantities of materials as and when they are required. The vendors supply the ordered material directly to the company's manufacturing unit a day or two before the production starts. This arrangement helps Zinc Inc. to reduce costs and boost efficiency. This scenario best illustrates

- A) continuous manufacturing systems.
- B) contract manufacturing.
- C) just-in-time inventory management.
- D) crowdsourcing.
- E) mass customization.

106) An inventory management technique that schedules the precise quantity of materials needed to make a product is called

- A) succession planning.
- B) material-requirements planning.
- C) benchmarking.
- D) flexible scheduling.
- E) capacity-requirements scheduling.

107) At Far Far Away Furniture, the inventory-control manager uses material-requirements planning and schedules the precise quantity of materials needed to make all the rustic furniture pieces the company plans to make each month. Which of the following is a basic component the inventory-control manager would need to create as part of material-requirements planning?

- A) a new product list
- B) a master production schedule
- C) a facility layout plan
- D) a balance sheet
- E) a balanced scorecard

108) Tru Diva, a brand of women's apparel and accessories, uses contract manufacturers in different countries. The company benefits because of the lower cost of labor and minimal government regulations in other countries compared to its home country. This is an example of

- A) bartering.
- B) benchmarking.
- C) outsourcing.
- D) reverse engineering.
- E) franchising.

109) All of the following are advantages of outsourcing EXCEPT it

- A) improves product quality.
- B) speeds up the time it takes products to get to the customer.
- C) allows companies to focus less on customer satisfaction.
- D) makes the supply chain more efficient.
- E) gives companies a competitive advantage.

110) Which of the following is a popular method of scheduling materials that 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) the Ansoff matrix
- B) the Program Evaluation and Review Technique (PERT)
- C) the continuous manufacturing system
- D) the economic order quantity (EOQ) model
- E) the in-basket technique

111) The Proactive Learning School wants to achieve a high level of quality in the education it provides. As a result, it sets a goal of winning the Malcolm Baldrige National Quality Award. Which of the following is one of the criteria the school must meet to receive this award?

- A) inseparability of production and consumption
- B) product management
- C) business results
- D) capacity
- E) agility

112) 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 output is highly tangible.
- D) the product is a service.
- E) a firm applies quality control.

- 113) Quality control refers to the
- A) processes an organization uses to maintain its established quality standards.
 - B) efforts of an organization to replace quality with productivity.
 - C) efforts of an organization to reduce the quality standards set by the best-performing companies.
 - D) inspections conducted by the government when a product's quality is above the required standard.
 - E) techniques an organization uses to control the costs of inputs and outputs.

114) BookPub, a large educational publishing company, has adopted a(n) _____ approach to gain a competitive edge in light of intense foreign competition and increasingly demanding customers. The company believes that uniform commitment to quality in all areas of its organization will promote a culture that meets customers' perceptions of quality.

- A) just-in-time inventory
- B) service quality
- C) economies of scale
- D) economic order quantity
- E) total quality management

115) Which of the following is an advantage of making a product correctly from the outset?

- A) It allows employees to make better use of their time and materials.
- B) It gives the company more time to rework defective products.
- C) It makes the transformation process slower and more deliberate.
- D) It allows the company to pinpoint quality problems in the production system.
- E) It eliminates the need to make other products.

116) Mario Autos Inc. measures and evaluates the quality of its cars and services against the market leaders in the automobile industry. Whenever there is a gap, Mario Autos Inc. tries to cover that gap by imitating the best practices of these market leaders. This is known as

- A) crowdsourcing.
- B) benchmarking.
- C) sampling.
- D) nearshoring.
- E) licensing.

117) Benchmarking lets an organization

- A) replace quality with productivity.
- B) know where it stands competitively in its industry.
- C) protect its processes and trade secrets from rival firms.
- D) eliminate quality control.
- E) limit employee participation in total quality management.

118) Testa is trying to improve the quality of its automobiles. To do so, its management might collect and analyze information about the production process to pinpoint quality problems in the production system. What system is management using in this scenario?

- A) total quality management
- B) statistical process control
- C) the Program Evaluation and Review Technique
- D) the in-basket exercise
- E) just-in-time inventory management

119) Sampling as a method to determine whether a product meets quality standards is most likely to be used when

- A) inspection tests are destructive.
- B) every product must be tested because of human life and safety.
- C) each product is highly customized.
- D) an elaborate testing technique is required.
- E) a firm has allotted a significant amount of time and money for testing.

120) The goal of the ISO 14000 standards is to

- A) penalize companies that do not adopt total quality management programs.
- B) limit benchmarking within companies.
- C) prevent companies from outsourcing to other countries.
- D) promote a uniform approach to environmental management among organizations.
- E) help companies focus on productivity as opposed to quality.

Essay Type Questions

121) Define operations management.

122) Discuss two challenges faced by a service organization during the management of its operations.

123) Rita and her friend Wanda intend to establish their own ventures. While Rita intends to establish a manufacturing company, Wanda 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.

124) Explain the concept of total quality management.