

- 1 **Process design or redesign is most important when**
- A) current performance is adequate
  - B) you have a significant competitive advantage
  - C) competitive priorities have changed**
  - D) the cost of inputs remain stable
- 2 **MacDonalds fast food restaurant encourages customers to participate in clearing their own tables to support their performance objective of**
- A) Quality
  - B) Dependability
  - C) Cost**
  - D) Flexibility
- 3 **A management consultancy is an example of a ( ) type process**
- A) high volume / high variety
  - B) high volume / low variety
  - C) low volume / low variety
  - D) low volume / high variety**
- 4 **The presence of a friendly receptionist in a budget hotel is an example of which of the four features of a service package**
- A) Supporting facility
  - B) Facilitating goods
  - C) Explicit services
  - D) Implicit services**
- 5 **Service process can be classified according to each of the following, except**
- A) The degree of customer satisfaction**
  - B) The degree of customer contact
  - C) The objective of the service activity defined as goods, information or people
  - D) The degree of service flexibility, ranging from standard to customised service
- 6 **The production system that has the highest equipment flexibility is**
- A) Job shop**
  - B) Batch
  - C) Repetitive production
  - D) Continuous processing
- 7 **When there is a high volume and low variety mix, there is typically**
- A) High Customisation
  - B) High Contact time
  - C) Small volumes of customer transactions
  - D) Short customer transaction**

**8 Which is the correct sequence in order of decreasing process flexibility?**

- A) Project / jobbing / batch / continuous / mass
- B) Continuous / mass / batch / jobbing / project
- C) Jobbing / batch / project / mass / continuous
- D) Project / jobbing / batch / mass / continuous**

**9 Service shops are characterised as which of the following?**

- A) Some customer contact, a degree of customisation and some staff discretion**
- B) Project orientated with little customisation
- C) Many customer transactions, involving limited contact time
- D) High-contact organisations where customers spend a considerable time in the service process

**10 Which of the following is NOT a characteristic of a mass process?**

- A) Products or services are standard and are produced in a large volume
- B) The product or service will be made to a specific customer order**
- C) Operations and equipment are dedicated to the product
- D) Work is varied with no fixed sequence of operation

**11 The volume-variety position of an operation has implications for almost every aspect of its design activities. In a low volume, high variety operation, which is the correct combination of design decisions?**

- A) Product/service standardisation high, location can be decentralised, flow intermittent
- B) Product/service standardisation low, location can be decentralised, flow continuous
- C) Product/service standardisation low, location can be decentralised, flow intermittent**
- D) Product/service standardisation low, location usually centralised, flow intermittent

**12 The design of products and services is separate and distinct from the design of processes and they should be treated quite independently**

- A) True
- B) False**

**13 The design activity has one overriding objective:**

- A) To provide products, services and processes that will satisfy the operation's customers**
- B) To ensure that the process of product or service production is efficient & effective
- C) To minimise the cost of producing the product or service
- D) To develop products or services that will appeal to end-users

**14 Why is process design important in the design activity?**

- A) Because processes are the most important part of services
- B) Because the cost of processes are higher than the cost of products
- C) Because the design of the process has a significant impact on the ability of the operation to meet its customers' needs**
- D) Because the manufacture of products is expensive and needs to be planned

**15 Environment constraints tend to affect the design of products and services, but not the design of the process which delivers them**

- A) True
- B) False**

**16 Which of the following is true of process types?**

- A) Mass services are similar to jobbing processes
- B) Service shops and batch are in a similar position, but one relates to manufacturing and the other to services**
- C) Jobbing processes have higher process variety than professional services
- D) Professional services have lower variety, but higher volume than service shops

**17 Automation has brought benefits to so many processes that it can be seen as the panacea for the operation manager's problems. True or false?**

- A) True
- B) False**

**18 Groups of similar machines are typically found together in ( ) processes**

- A) project
- B) jobbing
- C) batch**
- D) line

**19 Flexible manufacturing systems are of key importance in ( ) operations**

- A) project
- B) electronic production
- C) medium variety and volume
- D) high variety and low volume**

**20 Product and manufacturing process design are**

- A) separate
- B) incompatible
- C) interrelated**
- D) sequential

**21 Design is driven by**

- A) the creativity of the designer
- B) the marketing function
- C) the need to satisfy the customer**
- D) the need to maximise revenue

**22 ( ) is not a performance objective of the design process**

- A) cost
- B) speed
- C) revenue**
- D) dependability

**23 When designing services, which of the following is NOT a key feature**

- A) staff training costs**
- B) customer involvement
- C) simultaneous production and consumption
- D) intangible components

**24 Efficiency in resource usage is hard to obtain in service operations because of**

- A) buffering
- B) demand variability**
- C) intangible components
- D) inter-functional co-operation

**25 Process types for Services include, professional services, mass services and:**

- A) Jobbing
- B) Batch
- C) Service shops**
- D) Continuous services

**26 The service process matrix classification consists of three categories of services. Which of the three features listed below is not included in this classification?**

- A) Professional service
- B) Service shop
- C) Public service**
- D) Mass service

**27 Which type of service falls under the category of “high volume / low customisation”?**

- A) Service shop
- B) Professional service
- C) Mass service**
- D) Continuous services

**28. Process types for Services include, professional services, service shops and:**

- A) Jobbing
- B) Batch
- C) Mass services**
- D) Continuous services

**29. Process design decisions must be made when:**

- A) Demand or volume for a product is changing.
- B) Current performance is inadequate.
- C) Competitors are gaining a competitive advantage either by process or technology change.
- D) All the above**

**30. Which is the correct order for manufacturing process types starting with high volume/low variety and moving to low volume/high variety:**

- A) Batch, project, jobbing, mass, continuous
- B) Continuous, mass, batch, jobbing, project**
- C) Project, batch, mass, jobbing, continuous
- D) Jobbing, batch, mass, continuous, project

**31 Continuous processes involves:**

- A) Extremely high volumes and low variety: often single product**
- B) Very small quantities: 'one-offs', or only a few required
- C) Specially made: high variety, low repetition, 'strangers', every one 'customized'
- D) Skill requirements are usually very broad

**32 Jobbing processes involves:**

- A) One-off, complex, large-scale projects
- B) Specially made, customised products
- C) Different skills have to be co-ordinated
- D) Very small quantities: 'one-offs', or only a few required**

**33 Which of the following is true of service shops:**

- A) Service shops have high variety and very low volume
- B) Service shops include banks, high street shops, and car rental companies**
- C) Service shops have higher volume than mass services, but lower than professional services
- D) Service shops occupy a similar position to projects in terms of volume and variety

**34 In relation to process types, which of the following statements is true?**

- A)** Jobbing has higher variety than batch and higher volume than project
- B) Continuous has the lowest volume and variety
- C) Mass is higher variety than continuous and batch
- D) Project is higher variety and volume than batch

**35 The Service Package does NOT consist of the following feature:**

- A)** Supporting goods
- B) Facilitating goods.
- C) Explicit services
- D) Implicit services

**36 Which of the following industries is likely to have low equipment utilization?**

- A) Commercial baking
- B) Television manufacturing
- C) Chemical processing
- D)** Restaurants

**37 A mass process is commonly used to produce**

- A) High-volume, high-variety products
- B) Low-volume, high-variety products
- C)** High-volume, low-variety products
- D) Low-variety products at either high – or low-volume

**38 An assembly line is an example of a**

- A) Jobbing process
- B) Batch process
- C)** Mass process
- D) Continuous process

**39 Which of the following phrases best describes a mass process type?**

- A) Low volume, high variety
- B) Finished goods are usually made to order
- C) Processes are designed to perform a wide variety of activities
- D)** High fixed costs, low variable costs

**40 Which of the following phrases best describes a jobbing process type?**

- A)** Low volume, high variety
- B) Finished goods are usually made to a forecast and stored
- C) Operators are modestly skilled
- D) High fixed costs, low variable costs



- 41 The one-of-a-kind production of a product to customer order is a project**
- ☒ A) True  
B) False
- 42 One characteristic of batch production is fluctuating demand**
- ☒ A) True  
B) False
- 43 Mass production produces large volumes of a standard product for a mass market**
- ☒ A) True  
B) False
- 44 Continuous processes are used for very high volume commodity products**
- ☒ A) True  
B) False
- 45 Fluctuating demand, short production runs of a variety of products, and small to moderate quantities produced to customer order are characteristics most associated with**
- A) Continuous production  
B) Projects  
☒ C) Batch production  
D) Mass production
- 46 As production systems move from projects to batch production to mass production to continuous production**
- A) Production systems become more flexible  
☒ B) Demand volume increases  
C) Production systems become less automated  
D) Products become more customized
- 47 Mass production systems tend to employ**
- A) Specialized equipment and specialized labour skills  
B) General purpose equipment and limited labour skills  
C) General purpose equipment and specialized labour skills  
☒ D) Specialized equipment and limited labour skills

**48 One disadvantage of mass production is its**

- A) Low per-unit costs
- B) Lack of responsiveness**
- C) Speed of production
- D) Efficiency

**49 As production systems move from projects to batch production to mass production to continuous production**

- A) Processes become more flexible
- B) Customer involvement with the process increases
- C) Products become more standardised**
- D) Demand volumes decrease

**50 Mass production refers to high-volume production of a standardized product for a mass market**

- A) True**
- B) False

**51 Which type of operation is used to produce many different products with varying process requirements in lower volumes?**

- A) Jobbing**
- B) Mass
- C) Continuous
- D) Project

**52 Which of the following is not characteristic of jobbing type operations?**

- A) Capital intensive**
- B) Workers need to be able to perform different tasks depending on the processing needs of the product
- C) General purpose equipment
- D) Volume of goods produced directly tied to number of customer orders

**53 The classes that you are taking at the university use a ( ) process**

- A) Project
- B) Batch**
- C) Line
- D) Continuous

**54 What type of process is designed to produce a large volume of a standardised product for mass production, such as cars?**

- A) Project processes
- B) Batch processes
- C) Flow processes**
- D) Continuous processes



**55 Which type of process would be least likely to produce goods for inventory rather than for a specific customer request?**

- A)** Project
- B) Batch
- C) Line
- D) Continuous

**56 Services with low customer contact are called**

- A)** Mass services
- B) Service shops
- C) Pure services
- D) Professional services

**57 Highly labour intensive services are called ( )**

- A) Mass service
- B) Service shops
- C) Mixed services
- D)** Professional services

**58 Product design and process selection decisions are typically made separately.**

- A) True
- B)** False

**59 Continuous operations are used to produce many different products with varying process requirements in lower volumes**

- A) True
- B)** False

**60 A common difference between jobbing and mass operations is degree of product standardisation**

- A)** True
- B) False

**61 Jobbing operations group their resources based on similar operations**

- A)** True
- B) False

**62 Layout choices must be closely tied to process type choice. Which one of the following firms is most likely to select a process layout?**

- A) A construction company that builds dams and bridges
- B) An airplane company that assembles airplanes
- C)** A machine tool manufacturer who produces customized machine tools
- D) High volume car manufacturer

**63 Which one of the following statements is a disadvantage of a flow line layout?**

- A) Processing rates tend to be slower
- B) It is more vulnerable to changes in the products and services offered**
- C) More space and capital are tied up in inventory
- D) Materials handling tends to be costlier

**64 One of the major advantages of process layouts is**

- A) High equipment utilization
- B) Large work-in-progress inventories
- C) Flexibility in equipment and workforce allocation**
- D) Smooth and continuous flow of work

**65 A process layout would be most appropriate in which of the following settings?**

- A) A fast-food restaurant
- B) A car factory
- C) A gourmet restaurant**
- D) A steel mill

**66 A big advantage of a process layout is**

- A) Its flexibility**
- B) Its low cost
- C) The ability to employ low-skilled labour
- D) Its high equipment utilization

**67 Which of the following layouts generally has the best machine utilisation?**

- A) Fixed-position layout
- B) Product layout**
- C) Process layout
- D) Office layout

**68 The assumption of stability of demand is important for justifying which of the following layout types?**

- A) Fixed-position layout
- B) Product layout**
- C) Process layout
- D) None of the above

**69 Which layout type assumes an adequate volume for high equipment utilisation?**

- A) Product layout**
- B) Process layout
- C) Fixed-position layout
- D) Retail layout

**70 The main advantage of a product layout is typically**

- A) Low raw material cost
- B) High flexibility
- C) Low capital cost
- D) Low variable cost per unit**

**71 Facility layout refers to the arrangement of machines, processes, departments and other areas within an existing or proposed facility**

- A) True**
- B) False

**72 Process layouts group similar activities together according to the functions they perform**

- A) True**
- B) False

**73 Job shops typically employ process layouts**

- A) True**
- B) False

**74 Minimizing movement or material handling costs is a primary objective in process layout decisions**

- A) True**
- B) False

**75 When activities are arranged in a line according to the sequence of operations for assembling a particular product the layout is said to be a**

- A) Cellular layout
- B) Process Layout
- C) Product Layout**
- D) Fixed-position layout

**76 The physical location of business facilities can have a significant impact on the success of a company**

- A) True**
- B) False

**77 The factors important in determining the location of a manufacturing plant are usually different from those important in locating a service facility or a warehouse**

- A) True**
- B) False

**78 Labour is an important factor in a location decision**

- A)** True
- B) False

**79 Which of the following is not a primary factor in location decisions for manufacturing plants**

- A)** Proximity to customers
- B) Proximity to different modes of transportation
- C) Proximity to raw materials
- D) Proximity to significant labour

**80 Which of the following is a disadvantage of automation?**

- A)** Inflexibility for product and process changes
- B) Inconsistency of products
- C) Inefficiency for producing large volumes
- D) Harder to monitor quality

**81 Facilitating goods in a hotel's bill of resources would include**

- A) A Housekeeper
- B) A Fax machine
- C)** A towel
- D) A front-desk clerk

**82 The water and detergents in a car wash are examples of**

- A) The supporting facilities
- B)** The facilitating goods
- C) The explicit services
- D) The implicit services

**83 A university campus is an example of:**

- A)** The supporting facility
- B) The facilitating goods
- C) The explicit services
- D) The implicit services

**84 A collection of goods and services provided by a service process to its internal or external customers is called a:**

- A)** Service package
- B) Consumption bundle
- C) Delivery medium
- D) Product

- 85 Psychological benefits that the customer may sense only vaguely are:**
- A) The supporting facilities
  - B) Implicit services**
  - C) Explicit services
  - D) Facilitating goods
- 86 A new product development team that works together to make sure a new product can actually be built is engaging in:**
- A) Concurrent design**
  - B) Joint application development
  - C) Quality function deployment
  - D) Core process design
- 87 The design process is important to manufacturing firms, but not to service organizations.**
- A) True
  - B) False**
- 88 Simultaneously designing products and production processes is known as concurrent design**
- A) True**
  - B) False
- 89 Which of the following is not true when explaining why productivity tends to be lower in the service sector than in the manufacturing sector?**
- A) Services are typically labour intensive
  - B) Services are often difficult to evaluate for quality
  - C) Services are often an intellectual task performed by professionals
  - D) Service operations are typically capital intensive**
- 90 The service sector has lower productivity improvements than the manufacturing sector because:**
- A) The service sector uses less skilled labour than manufacturing
  - B) The quality of output is lower in services than manufacturing
  - C) Services usually are labour intensive**
  - D) Service sector productivity is hard to measure
- 91 Productivity tends to be more difficult to improve in the service sector because the work is:**
- A) Typically labour intensive
  - B) Frequently processed individually
  - C) Often an intellectual task performed by professionals
  - D) All of the above**

**92 Productivity is the most common measure of competitiveness**

- ☒ A) True
- ☐ B) False

**93 Key Performance Indicators are a set of measures to aid managers in evaluating performance in critical areas.**

- ☒ A) True
- ☐ B) False