

壹、問答題(每題二十分)

1. By referring to Figure 1, discuss the general concepts of Just-in-Time production.

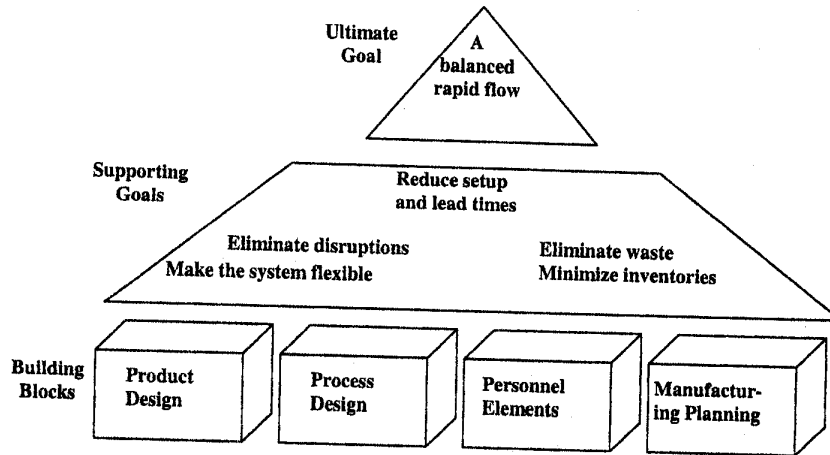


Figure 1. Goals and Building Blocks of JIT

2. 請敘述指數平滑法 (未含趨勢因子) α 值大小之影響?

註: 公式為

$$F_t = F_{t-1} + \alpha(A_{t-1} - F_{t-1})$$

where

F_t 為第 t 期之預測值

A_t 為第 t 期之實際發生值

參考用

貳、名詞解釋/簡答題: (每小題四分)

1. 衍生性需求 (Dependent demand)
2. 群體技術 (Group Technology)
3. 請敘述設計品質 (design quality) 與一致性品質 (conformance quality) 之分別。
4. 長鞭效應 (Bullwhip effect)
5. 作業及路線表 (Operation and Route Sheet) 之用處為何

參、選擇題(單選): (每小題二分)

1. Which of the following is not a factor commonly considered in the make-or-buy decision process?

- A) available capacity
- B) expertise

注: 背面有試題

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- C) nature of demand
D) cost
E) revenue
2. Computer-aided manufacturing (CAM) refers to the use of computers in:
A) product design
B) decision making
C) data analysis
D) quality control
E) process control
3. A group of machines including supervisory computer control, automatic material handling, and possibly robots is called:
A) automation
B) a manufacturing cell
C) computer-aided manufacturing
D) computer-integrated manufacturing
E) a flexible manufacturing system
4. In which type of operations are you likely to see minor variations in the product or service being produced using the same process and the same equipment?
A) a project
B) a job shop
C) repetitive production
D) batch processing
E) none of the above
5. The type of layout which is used to achieve a smooth and rapid flow of large volumes of output is:
A) process
B) product
C) fixed-position
D) batch
E) unit
6. The four primary determinants of quality are:
A) design, performance, ease of use, and service after delivery
B) design, conformance to design, reliability, and service after delivery

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- C) design, conformance to design, ease of use, and service after delivery
D) performance, conformance, reliability, and durability
E) design, durability, ease of use, and service after delivery
7. Quality planning and administration, quality training, and quality control procedures are examples of:
A) internal failure costs
B) external failure costs
C) appraisal costs
D) prevention costs
E) replacement costs
8. In a product layout, the process of deciding how to assign tasks to work stations is referred to as:
A) process balancing
B) task allocation
C) line balancing
D) work allocation
E) station balancing
9. The probability of concluding that assignable variation exists when only random variation is present is:
I the probability of a Type I error
II known as the alpha risk
III highly unlikely
IV the sum of probabilities in the two tails
A) I and II
B) I and IV
C) II and III
D) I, II, and IV
E) I, III, and IV
10. The purpose of control charts is to:
A) estimate the proportion of output that is acceptable
B) weed out defective items
C) determine if the output is within tolerances/specifications
D) distinguish between random variation and assignable variation in the

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- process
E) none of these
11. The term that pertains to incorporating customer ideas in product design is:
A) TQM
B) CAD
C) QFD
D) robust design
E) reverse engineering
12. Which of the following is true?
A) Corporate strategy is shaped by functional strategies.
B) Corporate mission is shaped by corporate strategy.
C) Functional strategies are shaped by corporate strategy.
D) External conditions are shaped by corporate mission.
E) Corporate mission is shaped by functional strategies.
13. Logistics refers to:
A) the movement of materials within a production facility
B) incoming shipments of goods or materials
C) outgoing shipments of goods or materials
D) all of the above
E) none of the above
14. Which of the following would not usually be a main factor in selecting a vendor?
A) location
B) price
C) quality
D) inventory turnover
E) vendor services
15. Purchasing may interface with:
A) operating units
B) accounting
C) legal department
D) engineering
E) all of the above

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16. Which of the items listed below would not generally be considered a reason for holding inventories?
- A) smoothing requirements on operations
 - B) decoupling internal operations
 - C) meeting anticipated demand
 - D) minimizing carrying costs
 - E) reducing the risk of a stockout
17. In a two-bin inventory system, the amount contained in the second bin is equal to the:
- A) reorder point
 - B) EOQ
 - C) amount in the first bin
 - D) optimum stocking level
 - E) safety stock
18. Which one of the following is implied by a "lead time" service level of 95 percent?
- A) Approximately 95 percent of demand during lead time will be satisfied.
 - B) The probability is 95 percent that demand during lead time will not exhaust the inventory.
 - C) The probability is 95 percent that demand during lead time will exactly equal the amount on hand at the beginning of lead time.
 - D) The probability is 95 percent that demand during lead time will not exceed the amount on hand at the beginning of lead time.
 - E) none of the above
19. Which of these products would be most apt to involve the use of a single period model?
- A) gold coins
 - B) hammers
 - C) fresh fish
 - D) calculators
 - E) frozen corn
20. Which of the following is an advantage of e-commerce?
- I reduction of transaction costs
 - II shortened supply chain response time

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III greater customer loyalty

- A) I
- B) II
- C) I and II
- D) II and III
- E) I, II, and III

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