Chapter 1. Supply chain focused manufacturing planning and control

MULTIPLE CHOICE

1. Choose, among the following trends, the ones that contribute to the popularity of manufacturing planning and control system (MP&CS) in industry.

   (1). Public awareness regarding Sustainability

   (2). Manufacturing and resource planning (MRP) developments

   (3). The supply chain revolution

   (4). Laws encouraging Remanufacturing

   a. (1) and (4)
   b. (2)
   c. (1), (3) and (4)
   d. None of the above

   ANS: C PTS: 1

2. Choose, among the following activities, the ones that do not fit into the typical Manufacturing Planning and Control Framework.

   (1). Master Production Scheduling (MPS)

   (2). Aggregate Planning

   (3). Manufacturing resource planning (MRP II)

   (4). Enterprise resource planning(ERP)

   a. (1) and (4)
   b. (4)
   c. (1), (3) and (4)
   d. (3) and (4)

   ANS: D PTS: 1

3. Select the activities not commonly associated with a manufacturing planning and control system (MP&CS).

   (1). Establishing the annual sales goals

   (2). Establishing capacity

   (3). Developing detailed material flows

   (4). Determining product demand

   a. (1)
   b. (1) and (4)
   c. (2)
   d. (3) and (4)

   ANS: A PTS: 1

4. Among the following relationship cases, select the customer-supplier relationship you think is the healthiest.

   a. The customer is closely integrated with the systems of a supplier who deals in commodities.

   b. The customer involves the supplier of a core component in its product design process.

   c. The customer uses its information gathered from closely working with an important supplier to reduce the supplier's selling price.

   d. The customer frequently uses reverse auctions in most of their purchase decisions.

   ANS: B PTS: 1

5. With the popularity of outsourcing and global logistics, the manufacturing environment has seen several changes. Among the following choices, select the changes that align with this current manufacturing environment.

   (1). Shorter product life cycles

   (2). MRPII is being viewed as the system of the future

   (3). An increase in fabrication value added

   (4). Popularity of customer driven supply chains

   a. (1)
   b. (1) and (4)
   c. (1), (3) and (4)
   d. All of the above

   ANS: B PTS: 1

6. Which of the following is not a well-known response by manufacturing to the changes in the current manufacturing environment?

   a. Adaptive manufacturing

   b. Statistic Process Controlled (SPC) manufacturing

   c. Just in Time manufacturing

   d. Lean manufacturing

   ANS: B PTS: 1

7. Choose the proper historical sequence of developments in manufacturing planning and control starting from the left.

   a. Adaptive->Lean->Flexible->Push
   b. Pull->Flexible->Push->Adaptive
   c. Push->Pull->Flexible->Adaptive
   d. Lean->Push->Flexible->Adaptive

   ANS: C PTS: 1

8. Which of the following choice are not included as one of the 5 elements of Lean?

(1). Efficient flows

(2). Specify value

(3). Push philosophy

(4). Quality perfection

a. (1) and (3)
c. (1), (2) and (4)
b. (3)
d. All of the above

ANS: B PTS: 1

9. Below are statements regarding either push or pull manufacturing. Select the correct ones.

(1). Pull manufacturing commonly results in relatively low inventory levels

(2). Comparatively, planning for pull manufacturing is more dependent of the company's forecasting efforts

(3). It is easier for problems with the manufacturing process to surface in a push manufacturing environment

(4). Pull manufacturing is associated with JIT and lean manufacturing philosophies

a. (1)
c. (1), (2) and (4)
b. (2) and (3)
d. (1) and (4)

ANS: D PTS: 1

10. Below are statements regarding either push or pull manufacturing. Select the incorrect ones.

(1). Well implemented pull systems have high levels of customer service

(2). Pull uses short and flexible production runs compared to push

(3). Push uses short and flexible production runs compared to pull

(4). Push manufacturing typically has longer lead times

a. (2)
c. (3)
b. (2) and (4)
d. (1) and (4)

ANS: C PTS: 1

11. Which of the following is not a term used to indicate one of the typical manufacturing environments?

a. Engineering to order (ETO)
c. Assemble to order (ATO)
b. Make to ship (MTS)
d. Make to stock (MTS)

ANS: B PTS: 1

12. For markets with _____ demand variability, the _____ manufacturing environment is most effective. Fill in the blanks.

    a. High/Engineering to order (ETO)
    b. Low/Make to ship (MTS)
    c. High/Assemble to order (ATO)
    d. High/Make to stock (MTS)

    ANS: A PTS: 1

13. In order to make products with a relative degree of high complexity, which manufacturing environment will be most effective?

    a. Assemble to order (ATO)
    b. Make to stock (MTS)
    c. Assemble to Stock (ATS)
    d. Make to Order (MTO)

    ANS: A PTS: 1

14. Which of the following environments is best suited for Process Manufacturing?

    a. Engineering to order (ETO)
    b. Make to stock (MTS)
    c. Engineering to Stock (ETS)
    d. Make to Order (MTO)

    ANS: B PTS: 1

15. There are 7 types of wastes identified by the lean philosophy. Some of the type is defective units, _____, and _____. Fill in the blanks.

    a. Overproduction/Under-processing
    b. Under-processing/Transportation
    c. Transportation/Motion
    d. None of the above

    ANS: C PTS: 1

16. The manufacturing concepts of JIT and Lean have been originally developed by companies in the _____ industry located in _____ and then popularized internationally.

    a. Automobile/Germany
    b. Furniture/Swaziland
    c. Automobile/Japan
    d. Electronics/Japan

    ANS: C PTS: 1

17. The Assemble to order (ATO) environment is characterized by _____ and _____.

    a. Standard products/Stable forecasts
    b. High customization/inaccurate forecasts
    c. Tailored unique products/Stable forecasts

d. Customization/Modular product architecture

ANS: D PTS: 1

18. The Make to order (MTO) environment is characterized by _____ and _____.

a. High customization/inaccurate forecasts

b. Standard products/Stable forecasts

c. An engineering/Unique products

d. Customization/ Modular product architecture

ANS: A PTS: 1

19. AMT. Inc.'s sales revenue for this quarter is $2,000,000. It incurred $1,200,000 in total costs. The total asset of the company is $6,000,000. What the return on assets (ROA)?

a. 25.43%

b. 5.50%

c. 7.75%

d. 13.33%

ANS: D PTS: 1

20. AMT. Inc.'s net income for this quarter is $500,000. The publicized return on assets (ROA) is 34.5%. Estimate the firm's total asset to the closet possible.

a. $1,500,000

b. $1,450,000

c. $2,450,000

d. $2,005,500

ANS: A PTS: 1

SHORT ANSWER

1. Describe the goal of the manufacturing planning and control system (MP&CS) in a paragraph.

ANS:
Read about MP&CS

PTS: 1

2. Describe in your own words what a customer-driven manufacturing philosophy is.

ANS:
Read about MP&CS

PTS: 1

3. Describe in your own words what a healthy customer-supplier relationship looks like.

   ANS:
   Read about supply chain relationships

   PTS: 1

4. Draw a graph of a typical product life cycle.

   ANS:
   A basic underlining concept

   PTS: 1

5. Define the Lean Philosophy.

   ANS:
   Read about lean manufacturing in chapter 1 and 7

   PTS: 1

6. In your own words, describe an Assemble to Order (ATO) environment with a minimum of one example.

   ANS:
   Read about Manufacturing Environments

   PTS: 1

7. What is the difference between Make to stock (MTS) and Make to order (MTO) environments?

   ANS:
   Read about Manufacturing Environments

   PTS: 1

8. What is the manufacturing environment base associated with Lot-size manufacturing technology?

   ANS:
   Read about Manufacturing Environments

   PTS: 1

9. Describe the 5 steps for implementing lean techniques.

ANS:
Read about lean manufacturing in chapter 1 and 7

PTS: 1

10. List 4 of the 7 types of lean waste.

ANS:
Read about lean manufacturing in chapter 1 and 7

PTS: 1