BAI3170

Chapter 08: Material Planning Process

Multiple Answers

1. Material planning is concerned with answering which basic questions?
2. Which planning version should the company choose?
3. What materials are required?
4. What is the shortest time required for completing the planning?
5. When are the materials required?
6. How many materials are required?
7. Which of the following statements concerning maintaining inventory at high levels are TRUE?
8. The longer the materials remain in storage, the more money the company loses.
9. Maintaining high levels of inventory can lead to serious write-offs.
10. Maintaining high levels of inventory is a recommended material planning policy.
11. Maintaining high levels of inventory can incur insurance costs.
12. The company may lose money storing excessive inventory, but the customer’s interest must be the company’s highest priority.

1. The proposals that material planning generates typically are in the form of
2. A planning proposal.
3. Planned orders.
4. A material order list.
5. Purchase requisitions.
6. Purchase list.
7. Which of the following statements concerning the material planning process are NOT TRUE?
8. It can involve the creation of an operations plan.
9. The demand management step creates requirements for individual materials.
10. The final procurement proposals trigger either the production or procurement process.
11. The requirements step specifies the way the materials will be transported.
12. MRP uses sales objectives to generate the final procurement proposals.
13. Which of the following are key organizational elements in materials planning?
14. Company code
15. Shipping point
16. Plant
17. Storage location
18. Sales area

1. Which of the following are master data relevant to material planning?
2. Storage location
3. Bills of material
4. Material master
5. Planning version
6. Production version
7. Which of the following statements regarding the MRP views of the material master are TRUE?
8. There are four MRP data views.
9. The system uses the MRP 4 view to select the correct BOM.
10. There are three MRP data views.
11. The system uses the MRP 3 view to determine how to procure materials (make vs. buy).
12. The system uses the MRP 1 view to select the correct BOM.
13. Which of the following statements concerning the outcome of the material planning process are NOT TRUE?
14. The outcome can be multiple procurement proposals.
15. The outcome is always a single procurement proposal.
16. The outcome triggers the sales and operations planning step.
17. The outcome triggers the forecasting planning step.
18. The outcome can trigger either the production or the procurement process.
19. Which of the following represent procurement types?
20. Consumption-based planning
21. External
22. Section 2
23. None
24. No planning
25. Which of the following are production control techniques as indicated by the MRP type in the material master?
26. Consumption-based planning
27. External control
28. Internal control
29. Sales order-based planning
30. No planning

1. Which of the following represent reasons why a company should maintain a safety stock?
2. The ERP system can be configured to automatically prevent inventory from falling below the safety stock levels.
3. To avoid stock-outs
4. Maintaining a safety stock of at least 20 pieces is mandatory in the ERP system.
5. Maintaining a safety stock will guarantee that supply meets demand.
6. To avoid lost sales
7. Which of the following statements about consumption-based planning are NOT TRUE?
8. It includes forecast-based planning as one of its categories.
9. It calculates the requirements for a material based on historical consumption data.
10. It is relatively more complicated compared with MRP.
11. It assumes that future consumption will follow the same patterns as past consumption.
12. It takes into account dependencies between different materials.
13. Which of the following statements about MRP and MPS are TRUE?
14. MPS calculates requirements for all the levels of the BOM.
15. MRP calculates requirements only for the first-level items in the BOM.
16. Both MRP and MPS calculate requirements based on historical data only.
17. MRP calculates requirements for all levels of the BOM.
18. MPS calculates requirements only for the first-level items in the BOM.
19. Which of the following are common time estimates utilized during the planning process?
20. Production planning time
21. GR processing time
22. Planned delivery time
23. Planned receiving time
24. In-house production time

1. Which of the following are elements of the in-house production time?
2. Interoperation
3. Planned delivery
4. Processing
5. GR
6. Setup
7. The lot size independent in-house production time is used in which of the following scenarios?
8. The lot size is fixed.
9. Processing time is constant.
10. Processing time is very short compared to the setup and interoperation times.
11. Processing time is long in comparison to the setup and interoperation times.
12. The quantity of material to be produced varies.

1. Multiple BOMs can be created for a single material in which of the following situations?
2. The same material is produced in different plants.
3. The material is produced in the same lot sizes.
4. The material is produced in different lot sizes.
5. A bike model is upgraded with a new tire.
6. The company applies a make-to-order production planning strategy to fulfill a customer order for a material.
7. Which of the following statements regarding a BOM are TRUE?
8. A BOM identifies the components needed to make the material.
9. A BOM identifies the sequence of operations needed to make the materials.
10. A BOM component can have its own BOM.
11. A BOM identifies the material’s routing strategy.
12. A BOM is plant specific.

1. Which of the following items represent demand elements of the availability check group?
2. Purchase requisitions
3. Production orders
4. Purchase orders
5. Safety stock
6. Material reservations
7. Identify the SAP ERP terms for net requirements planning and planning with final assembly.
8. Strategy 10
9. Strategy 20
10. Strategy 30
11. Strategy 40
12. Strategy 50
13. Which of the following statements about a product group are TRUE?
14. It is used to group products with similar planning characteristics.
15. Each member of a product group is assigned a group factor.
16. Materials can be members of more than one product group for different planning scenarios.
17. A material can belong to only one product group.
18. Each member of a product group is assigned a proportion factor.
19. Sales and operations planning involves the creation of a(n)
20. Financial document.
21. Material movement.
22. Sales forecast.
23. Operations plan.
24. Material document.
25. The MRP controller \_\_\_\_\_\_\_\_
26. Is a step in the planning process in which PIRs are transferred to demand management.
27. Uses variety of reports and makes adjustments to procurement proposals, as needed.
28. Transfers CIRs into PIRs.
29. Is a planning tool that generates forecasts.
30. Monitors material availability.
31. The purpose of the materials requirements planning step is to

1. Calculate PIR.
2. Calculate CIR.
3. Calculate net requirements.
4. Generate procurement proposals (requisitions and planned orders).
5. Calculate reorder points.
6. Which of the following statements concerning MRP-based planning are TRUE?
7. Planning is based on historical data.
8. Planning is based on exploding the BOM.
9. Dependent demand is derived from independent demand.
10. It is used for low-value materials.
11. Planning is based on calculating a reorder point.
12. Which of the following statements regarding MRP are TRUE?
13. Planning is executed for only the first level of the material’s BOM.
14. MRP can be executed for one plant only.
15. MRP can result in planned orders.
16. MRP can result in purchase orders.
17. MRP can be executed for a single level or multiple levels of the BOM.
18. Which of the following statements about the MRP step in the material planning process are TRUE?
19. MRP can be executed for one plant.
20. Planning for specific storage location in not possible with MRP.
21. MRP can be executed for multiple plants.
22. MRP can be executed within MRP areas.
23. MRP can only be executed manually by the MRP controller.
24. Which of the following are steps in the MRP procedure?
25. Check planning file
26. Scheduling
27. Lot size calculation
28. Bins calculation
29. Storage location inspection
30. If materials are to be procured externally, then, in the determine procurement proposal step, MRP
31. Can create purchase requisitions.
32. Will always generate planned orders.
33. Will determine the quantity of material to procure.
34. Can create planned orders.
35. Can create schedule lines.
36. Identify which of the following are processing keys:
37. Schedule lines
38. Regenerative planning
39. Net change planning
40. Purchase requisition planning
41. Planning mode
42. Which of the following are tasks in SOP?
43. Monitoring exceptions
44. Creating a sales plan
45. Evaluating feasibility
46. Creating revised PIRs
47. Adjusting schedules
48. Which of the following are possible outcomes in MRP?
49. Operations plan
50. Purchase requisitions
51. Production plan
52. Planned orders
53. Dependent requirements
54. Which of the following statements about the MRP list are TRUE?
55. It displays static data.
56. It highlights changes to MRP elements.
57. It is the most important reporting tool.
58. The MRP controller is the only one authorized to generate it.
59. It displays MRP elements.

**Multiple Choice**

1. The main objective of material planning is
2. To minimize the expenses for storing excess inventory.
3. To balance the demand for materials with the supply.
4. To shorten the duration of the procurement cycle.
5. To eliminate excess inventory.
6. To prevent lost sales.
7. The money tied up in inventory best represents
8. An opportunity cost.
9. A liquid asset.
10. A strategic policy.
11. A high risk for loss.
12. A material planning strategy.
13. A purchase requisition is
14. A confirmation for purchasing materials.
15. Proof of delivery.
16. A document issued by a vendor.
17. A request to purchase materials.
18. A confirmation of an inbound delivery.
19. Requirements in the material planning process specify
20. The master data requirements.
21. How the material planning should be executed.
22. The work center capacity.
23. Requirements for the different modes of transportation.
24. How many of the materials are needed and when they are needed.

1. The organizational data elements in material planning are:
2. Plant, production version, company code.
3. Planning version, company code, client.
4. Client, company code, production version.
5. Storage section, client, storage location.
6. Client, company code, plant, storage location.

1. The master data elements in material planning are:
2. Material masters, product types, storage location, vendors.
3. Product routings, bills of material, material masters, product groups.
4. Product types, product routings, material masters, product groups.
5. Product routings, product types, material masters, customers.
6. Material masters, storage location, product groups, product routings.
7. A company has two options for procuring materials: make or buy. Which MRP data view of the material master will the ERP system consider for this decision?
8. MRP 1
9. MRP 2
10. MRP 3
11. MRP 4
12. None of the above
13. Which of the following statements best represents what procurement type indicates?
14. How a material is produced
15. Vendor’s groups
16. All of the ways to procure a material the user will choose from when making a decision
17. Whether a material is produced in house, obtained externally, both, or none
18. How a vendor will be chosen in the procurement process
19. MRP type specifies
20. Whether the material is produced in house or is obtained externally.
21. How material quantities for planning will be calculated.
22. The production control technique used in planning.
23. The available time periods the ERP system can use for scheduling.
24. The strategy for BOM selection.
25. Replenishment lead time is
26. The time between placing an order and receiving the materials.
27. The amount of time the routing operations will last.
28. The length of time a working center usually operates (in hrs, in one day).
29. Another term for capacity.
30. A synonym for interoperation time.

1. Which of the following statements about consumption-based planning is TRUE?
2. Planning is based on historical data.
3. Planning is based on exploding the BOM.
4. Dependent demand is derived from independent demand.
5. It is used for high-value materials
6. Planning is based on MPS.
7. Which of the following options represents categories of consumption-based planning?
8. Materials-requirement planning, time-phased planning, reorder-point planning
9. Master production scheduling, MRP, forecast-based planning
10. MRP, forecast-based planning, master production scheduling
11. Forecast-based planning, time-phased planning, reorder-point planning
12. None of the above
13. A company would be most likely to apply consumption-based planning for which of the following products?
14. Car
15. Brake
16. Engine
17. Printer
18. Pen
19. The MRP technique calculates the requirements for a material based on
20. Historical data.
21. Current data.
22. The material’s dependence on other materials.
23. Material type.
24. Replenishment lead time.
25. Exploding the BOM refers to
26. Creating the BOM hierarchy showing all the levels of the BOM.
27. Calculating and planning requirements for materials at all levels of the BOM.
28. Executing the BOM for materials at the top level of the BOM.
29. Choosing the planning strategy for the BOM.
30. Generating multiple BOMs for materials in the same material group.

1. Requirements that are calculated based on actual and forecasted sales are known as
2. Planned independent requirements.
3. Customer-planned independent requirements.
4. Integrated independent requirements.
5. Forecast-independent requirements.
6. Customer-independent requirements.
7. The lot size key specifies the
8. Optimum lot size for a group of materials.
9. Recommended lot size for a material.
10. Procedure used to determine the capacity of a storage area.
11. Lot size groups per each material type.
12. Procedure that is used to determine the lot size.
13. The static lot-sizing procedure
14. Combines the requirements from multiple time periods into one lot.
15. Specifies a fixed quantity based on fixed lot size.
16. Specifies a quantity that is fixed for a specific, limited time period.
17. Specifies a fixed quantity based on either fixed lot size or lot-for-lot.
18. Combines quantities for multiple time periods into several lots.
19. Setup time, processing time, and interoperation time are elements of
20. In-house production time.
21. Goods issue processing time.
22. Planned delivery time.
23. Goods receipt processing time.
24. Planned shipping time.
25. Setup time is the time required to
26. Set up the operations used in a work center.
27. Move materials from one work center to another.
28. Process materials in production.
29. Set up the work centers used in production.
30. Move materials from one storage location to another.
31. In SAP ERP production planning strategy, net requirements planning (Strategy 10), procurement proposals are based on
32. CIRs and components that are already in stock.
33. PIRs, with regard to CIRs.
34. PIRs, without regard to CIRs.
35. CIRs, but components are not in stock.
36. PIRs, but the components are not in stock.
37. Consider the following scenario, then choose which one of the options below corresponds to the level of CIRs and PIRs after consumption.

Before consumption:

Procurement proposal for CIRs: 50

Procurement proposal for PIRs: 50

1. CIRs: 50, PIRs: 0
2. CIRs: 50, PIRs: 50
3. CIRs: 0, PIRs: 0
4. CIRs: 0, PIRs: 50
5. CIRs: 100, PIRs: 100
6. The manner in which CIRs consume PIRs is determined by the
7. Consumption type.
8. Consumption mode.
9. Consumption strategy.
10. Planning strategy.
11. Planning type.
12. What does SOP stand for?
13. Sales and operations planning
14. Strategic operations planning
15. Sales operations planner
16. Systems operations products
17. Sales operations projects
18. What is SOP used for?
19. Creating an operational plan and material documents
20. Calculating the financial impact of the material movements
21. Generating and executing the operations plan
22. Tracking material movements
23. Forecasting and planning

1. After the SOP process has generated the production plan,
2. SOP executes the plan.
3. The plan is conveyed to MRP for execution.
4. The plan is transferred to demand management.
5. SOP uses the plan to generate execution plan.
6. The plan is saved as a production version.
7. The planning table is best defined as

1. An independent tool used for parallel execution of the SOP process.
2. An interface for transferring data into SOP.
3. An interface used to enter all the operational plans.
4. A spreadsheet-like tool used to complete the tasks in SOP.
5. A brainstorming session for selecting the most appropriate plan.

1. Given the information below, calculate disaggregated quantities for touring bikes (TOUR) and off-road bikes (ORBK).

Total production = 100

TOUR proportion factor = 35

ORBK proportion factor = 65

1. TOUR = 35, ORBK = 65
2. TOUR = 65, ORBK = 35
3. TOUR = 0, ORBK = 65
4. TOUR = 35, ORBK = 0
5. TOUR = 50, ORBK = 50

1. Master production scheduling is specialized form of
2. MRP.
3. Demand planning.
4. SOP.
5. Production planning.
6. Operations scheduling.

1. Given the following information, use the net requirement calculation to calculate the available stock.

MRP type is consumption-based planning.

Plant stock = 100

Receipts = 20

Issues = 10

Safety stock = 30

1. 120
2. 130
3. 80
4. 70
5. 110
6. Given the following information, use the net requirement calculation to calculate the available stock.

MRP type is MPS.

Plant stock = 100

Receipts = 20

Issues = 10

Safety stock = 30

1. 120
2. 130
3. 80
4. 70
5. 110
6. In the determine procurement proposal step, for materials with the procurement type of internal, MRP will:
7. Generate purchase requisitions.
8. Provide three options.
9. Prompt the MRP controller to select the appropriate production version.
10. Transfer this step to MPS.
11. Always generate planned orders.

1. Which of the following is most likely to trigger the MRP process?
2. A periodic planning need
3. Changes to MRP elements
4. The need for an operations plan
5. Events affecting demand
6. Events affecting supply
7. The most important reporting tool in material planning is the
8. Planning result report.
9. MRP list.
10. Stock overview.
11. Stock/requirements list.
12. Strategies list.
13. The stock/requirements list displays
14. Changes in the planning situation since MRP was run.
15. MRP elements at an aggregation level.
16. All MRP elements for a material.
17. Required materials per production version.
18. All materials needed per MRP element.

Question type: True or False

1. Lack of overall planning may result in excess inventory and lost sales.
2. When a company transfers part of the materials in stock from one distribution center to another, this scenario is known as stock-out.
3. Material planning is one of the most complex processes within an organization.
4. Planned orders are requests to produce materials.
5. MRP uses requirements to generate the final procurement proposals
6. Storage area is one of the organizational data elements in material planning.
7. Product routings is one of the master data elements in material planning.
8. Work scheduling data are defined at the client level.
9. MRP is defined at the plant level.
10. MRP data are specific to each plant.
11. In-house production is the most common procurement type for raw materials.

1. Semifinished goods are typically purchased from vendors
2. MRP type specifies the production control technique used in planning.
3. Consumption-based planning calculates the requirements for a material based on current consumption data.
4. In time-phased planning, materials are ordered when the stock level reaches a predetermined level known as the reorder point.
5. Consumption-based planning assumes that future consumption will follow the same patterns as current consumption.
6. In a scenario when the need for brakes depends on the need to produce cars, consumption-based planning will be an appropriate strategy to use.
7. Typically, semifinished goods and raw materials have dependent requirements.
8. The input to MRP is the independent requirement for the finished goods.
9. MPS is a mandatory step in the planning process and is usually followed by MRP.
10. Period lot-sizing procedures combine the requirements from multiple time periods, such as days or weeks, into one lot.
11. For externally procured materials, the planned delivery time and the GR processing time are used
12. Lot size dependent times remain the same regardless of the amount of the material being procured.
13. The BOM selection method in the material master identifies the criteria the system should use to select the BOM.
14. A BOM is used only in the materials planning process.
15. Planning with final assembly takes into consideration current sales orders.
16. product is made to stock.
17. The strategy group defines the strategy the system uses to determine whether a quantity of material will be available on a specific day.
18. A BOM always identifies the components needed to make one unit of the finished product.
19. In make-to-stock strategy the production of the finished goods and any needed semifinished goods is triggered by a sales order.
20. Consumption-based planning derives dependent demand based on independent requirements and exploding the BOM.
21. A product group groups products with similar planning characteristics, such as similar types.
22. Whether SOP is required depends on the production planning strategy used for the material.
23. The MRP controller is a program in the SOP process that is responsible for creating procurement proposals and monitoring material availability.
24. SOP can be either flexible or standard.
25. The operations plan is an outcome of SOP.
26. After planning the master schedule items, MRP creates dependent requirements for the components of those items.
27. MPS is generally appropriate for high-value items only.
28. MPS creates planned orders for the MPS items and dependent requirements for all items in the BOM.

1. Net requirements calculation is one of the steps in MRP.
2. The lot size calculation step in MRP is used to determine whether there is a need to procure the material.
3. The ERP system initially uses forward scheduling and employs backward scheduling only if forward scheduling is unsuccessful.
4. A processing key is a control parameter that determines how the materials in the MRP list will be organized.
5. The schedule lines control parameter applies to scheduling agreements.
6. The MRP list, unlike the stock/requirements list, highlights changes to MRP elements that have occurred since MRP was executed.
7. The planning result report aggregates quantities for MRP elements to make it easier to view the