BSCM Sample TEST.

1. Which of the following demand fulfillment approaches typically provides the longest delivery time?
   A) Engineer-to-order.  
   B) Make-to-order.  
   C) Assemble-to-order.  
   D) Make-to-stock.

2. Which of the following is generally a characteristic of a product-focused layout?
   A) Large queues at workstations.  
   B) Fixed flow of work.  
   C) Production to a work order.  
   D) General purpose workstations.

3. Which of the following is generally a function of the physical distribution system?
   A) Production activity control.  
   B) Production planning.  
   C) Packaging.  
   D) Bill of material.

4. Forecasts are typically more accurate for the near future than they are for the longer future. This occurs because
   A) The near term holds less uncertainty than the long term.  
   B) More data is available in the near term.  
   C) Aggregate data is easier to forecast.  
   D) The future is more dynamic in the near term.

5. A forecast is typically more accurate for
   A) Groups of items rather than for individual items.  
   B) Daily rather than monthly periods of time.  
   C) Physical units rather than monetary units.  
   D) Far out in the future rather than nearer time periods.
6. An anticipated build schedule can be BEST described as
   A) Production plan.          B) Capacity plan.
   C) Materials requirements plan.  D) Master production schedule.

7. Which of the following is MOST likely to be a dependent demand item?
   A) A manufactured subassembly.          B) An item in a grocery store.
   C) A service part.                    D) An office supply item.

8. Which of the following manufactured product types are BEST suited for flow manufacturing?
   A) Wide range of disparate products.
   B) Limited range of similar products.
   C) Low volume of similar products.
   D) High volume of disparate products.

9. The master production schedule is generally a direct input to
   A) Production planning.          B) Material requirements planning (MRP).
   C) Purchasing planning          D) Production activity control (PAC).

10. A company needs to produce 4000 units over the next two months. There are 21 working days in the first month and 19 working days in the second month. What must the daily rate be with a level strategy?
    A) 50          B) 75          C) 100          D) 125

11. The portion of a company's inventory and planned production which is not already committed is
    A) Inventory allocation.          B) Inventory commitment.
    C) Available to promise.        D) Multi-plant planning.
12. Final assembly scheduling usually occurs when
   A) A customer order is received.   B) Planning a build schedule.
   C) The MPS is established.       D) Capacity is constrained.

Item 13 is based on the following data.
   Beginning inventory = 200 units
   Ending inventory = 200 units
   Sales forecast:
   Month 1 2 3 4 5
   Quantity 200 300 200 400 300

13. What is the required monthly production to achieve level production?
   A) 220 units   B) 240 units   C) 280 units   D) 340 units

14. In order for a forecast to signal negative bias, the tracking signal would be

15. Which of the following identifies the demand for capacity at a work center in a specific time period?

16. A forecast analyst has just extracted the recent actual sales history and, in reviewing the data, notices several outliers. The analyst should most likely
   A) Rerun the data to ensure there were no errors in the extract.
   B) Rerun the data but remove the outliers.
   C) Ignore the outliers and use the forecasts as is.
   D) Refer to the tracking signal.
Items 17 and 18 are based on the following indented bill of material.

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<td>4</td>
</tr>
<tr>
<td>1</td>
<td>G</td>
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17. How many units of part C are required to produce one unit of part A?
   A) 2    B) 4    C) 6    D) 8

18. Which of the items in the bill of material are parents?
   A) A only.    B) B, C, and G only.
   C) A and B only.    D) A, B, C, and G only.

19. The primary reason for a time fence is to
   A) Determine how to use the forecast.
   B) Manage schedule changes most effectively.
   C) Provide a stable schedule for the suppliers.
   D) Maintain a steady shipment schedule.

20. The setup time for an operation is two hours and the run time is 10 minutes per piece. The scheduled operation time for 100 units is
   A) 130 minutes.    B) 1,000 minutes.    C) 1,100 minutes.    D) 1,120 minutes.

21. Which of the following is NOT an input to MRP?
   A) Master Production Schedule.    B) Inventory records.
   C) Bill of f materials.    D) Capacity planning.
22. Material requirements planning (MRP) schedules a planned order receipt when
   A) A gross requirement exists.              B) A net requirement exists.
   C) An exception is generated.               D) Safety stock is zero.

23. A firm planned order is used to
   A) Freeze the planned order against changes in quantity and time.
   B) Convert the planned order to a scheduled receipt.
   C) Simulate the projected inventory balance.
   D) Manipulate the data and quantity of the customer order.

24. A closed loop MRP system can be BEST defined as
   A) Action taken by a planner to approve planned orders.
   B) Re-planning of capacity to accommodate restraints.
   C) Integrated planning and control system with feedback from the bottom-up.
   D) Integrated systems which include financial software, finite capacity, and logistics.

25. A bill of materials contains
   I. Components used to make a product.
   II. Labor needed to build the product.
   III. Assemblies at various stages of production.
   IV. Safety stock by item.

   A) I and II         B) I and III           C) II and III           D) III and IV

26. Which of the following BEST describes scheduling of operations before a bottleneck work center?
   A) Operations should be scheduled as early as possible.
   B) Work centers feeding the bottleneck should be scheduled to full capacity.
   C) Operations should be scheduled to the rate of the bottleneck.
   D) Setup time should be reduced for operations before the bottleneck.
27. Rough cut capacity planning can be BEST described as
   A) Checking to be sure that critical resources are available to support the preliminary MPS.
   B) Making sure warehouse space is available for raw materials.
   C) Making certain the load at each work center is less than capacity.
   D) Ensuring resources are available by product family.

28. A purpose of holding extra inventory is to
   A) Allow production to select what to run.
   B) Minimize the bill of material levels.
   C) Reduce the number of purchased items.
   D) Buffer production from demand variation.

29. Which of the following provides a buffer for seasonal demand ?
   A) Lot-size inventory
   B) Fluctuation inventory.
   C) Anticipation inventory
   D) Decoupling inventory.

30. Which of the following BEST describes a normal distribution ?
   A) Most values clustered near a central point.
   B) Warehouses centrally located to markets.
   C) Values accumulated at six sigma.
   D) A critical ratio of 1.0.

31. Owners equity is
   A) Revenue less liabilities.
   B) Revenue less expenses.
   C) Assets less liabilities
   D) Assets less expenses.
32. Which of the following BEST defines the term break even point?
   A) The point at which a product fails.
   B) Current assets = current liabilities.
   C) Required capacity = available capacity.
   D) Revenues = total costs.

33. The inventory turnover ratio is
   A) 1.5   B) 1.6   C) 4.0   D) 6.4

34. An item has a lead time of six weeks and an average demand of 150 units per week. The safety stock for the item is 300 units and the order quantity is 2,000 units. The order point for the item is
   A) 300 units   B) 900 units   C) 1,200 units   D) 2,000 units

35. Which of the following is MOST consistent with ABC analysis and control?
   A) All items should have the same level of control.
   B) A small number of items account for a large portion of annual usage value.
   C) Items need tight control.
   D) Perpetual inventory records are required for all items.

36. Each distribution center places orders from central supply as they are needed. This is called:
   A) Pull system.   B) Push system.
37. In a decentralized distribution system, the role of the central supply organization is to
A) Determine when to replenish stock at the distribution centers.
B) Respond to demands from the distribution centers.
C) Coordinate communications among distribution centers.
D) Forecast demand at each distribution center.

38. The primary purpose of a cycle count program is to
A) Correct inventory errors. B) Result in fewer counts per year.
C) Require less skilled counters. D) Identify causes of inventory errors.

39. If a purchased part order is late, which of the following would be the MOST likely source to
determine which customer order would be affected?

40. Which of the following BEST describes the use of bills of material in planning systems?
A) For the engineering design. B) For lot sizing.
C) The process to make the item. D) How the product is built.

41. If purchases are 50% of sales and other expenses are 40% of sales, what would the increase in profit be if the purchase cost could be reduced to 45% of sales?
A) 5% B) 10% C) 25% D) 50%
Item 42 is based on the following data.

Periods:   1   2   3   4   5
Forecast:  20  20  30  20  25
Actual demand:  22  18  25  20  19

42. The mean absolute deviation (MAD) for the data given is
   A) 2.2   B) 3   C) 11   D) 15

43. The annual demand for a product is 1200 but during July, the product sells 150 units. What is the seasonal index for the product in July ?
   A) 1.0   B) 1.5   C) 1.75   D) 2.00

44. How many of what products are needed and when products are needed are questions of which of the following ?

45. The end items and quantities to be produced by period are defined by which of the following ?
   A) Strategic business plan.   B) Production plan.
   C) Master production schedule.   D) Dispatch list.

46. A primary advantage of electronic data interchange (EDI) with suppliers is that it
   A) Reduces paperwork.   B) Bypasses the buyer.
   C) Employs the latest technology.   D) Supports unlimited forms of communications.

47. The last operation is scheduled for completion on the due date. Other previous operations are scheduled so that the due date can be met. This describes
   A) Backward scheduling.   B) Master scheduling.
48. In most cases, the fastest way to increase capacity to meet a short-term requirement is to
A) Hire additional workers.                     B) Use overtime.
C) Acquire more equipment.                    D) Subcontract work.

49. When the next operation is allowed to begin before the entire lot is completed on the previous
operation, this is called :
A) Operation splitting.                          B) Operation overlapping.

50. The demand at a workstation in a Just-in-Time system typically comes from
A) A pull signal.                                   B) A dispatch list.
C) The production plan.                            D) A control chart

51. Which of the following BEST describes a Kanban system ?
A) A quality control system.                  B) Basically is a push production.
C) Requires operator flexibility.               D) Basically is a visual reorder point.

52. The master production schedule (MPS) is
A) An anticipated build schedule.             B) An input to the production plan.
C) A statement of forecast demand.            D) Driven by material requirements planning.

53. What is the major disadvantage of a fixed location warehouse ?
A) Put away time is increased.                B) Cube utilization is poor.
C) Dock time is increased.                   D) Material handling costs rise.
54. The balance sheet for a firm shows which of the following?
A) Profit or loss for the period.  B) Sources and uses of funds.

Item 55 is based on the following data.

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55. The projection for the seventh month using a three-month moving average would be
A) 100  B) 101  C) 103  D) 105

56. Which of the following links product family planning and component planning?
A) Production planning.  B) Master scheduling.
C) Material requirements planning.  D) Resource requirements planning.

57. A pegging report is used to
A) Trace the origin of demand for a component.
B) Trace the capacity requirement for a part.
C) Identify the quantity per for a particular parent.
D) Establish the demand for a part.

58. To increase the throughput of a factory, the industrial engineers have made recommendations which will increase the capacity of a non-bottleneck resource by 40%. What impact will this change have in the throughput of the factory?
A) Increase the factory output by 40%.
B) Depends on the number of work centers.
C) Depends on the number of employees.
D) No impact.
59. Which of the following production processes is MOST appropriate for high-volume bulk products?

60. Which of the following detects bias in a forecast model?

61. Over the past three months, the demand for a product has been 240, 260, and 280. Calculate the three month moving average forecast for month four.
A) 240 B) 260 C) 280 D) 300

62. The projected available at the end of Week 4 is
A) Zero units. B) 100 units. C) 200 units. D) 300 units.

63. Which of the following is the MOST likely impact of doubling the ordering costs for an item?
A) The order quantity will increase. B) The order point will increase.
C) The order quantity will decrease. D) The order point will decrease.

64. A key element in selecting a site for a factory is
C) Cost and availability of transportation. D) Warehouse space and cost.
65. Work-in-process inventory serves to decouple which of the following?
   A) Production from suppliers.
   B) Finished good inventory from customer demand.
   C) An operation from succeeding operations.
   D) Production from distribution channels.

66. Which of the following would MOST likely be an independent demand item?
   A) Inventoried subassembly for a printer.
   B) Manufactured subassembly in a car.
   C) Purchased component for a fork truck.
   D) Spare part for a jet engine.

67. Which of the following defines the sequence of operations to be performed to manufacture a part?

68. Which of the following BEST describes an exception message?
   A) A message to the planner that a problem needs attention.
   B) A message that the MRP system is done running.
   C) A message that the system is in balance.
   D) A message to order within lead time.

Items 69 and 70 are based on the following information for a single work center.
Number of machines = 4, Number of shifts = 1.
Shift length = 40 hours, Efficiency = 90%, Utilization = 90%.

Actual output
Week 1 = 160 hours, Week 2 = 140 hours
Week 3 = 150 hours, Week 4 = 150 hours

69. Which of the following is the rated capacity for the work center?
   A) 130 hours.  B) 144 hours.  C) 150 hours.  D) 160 hours.
70. Which of the following is the demonstrated capacity for the work center?
   A) 130 hours.         B) 144 hours.         C) 150 hours.         D) 160 hours.

71. The key component to quick changeovers is
   A) Dramatically reduced set up times.
   B) Availability of materials to run when the changeover is complete.
   C) Expensive machines which changeover automatically.
   D) Large enough lot sizes so changeovers are not critical.

72. Which of the following is used to manage queues and lead times?
   A) Forward scheduling.                     B) Rough-cut capacity planning.
   C) Material requirements planning.          D) Input/output control.

73. Managing bottlenecks is extremely important to the throughput of the production facility. All of the
    following should be done to manage bottlenecks EXCEPT
    A) Change the schedule frequently to meet customer promises.
    B) Maintain a time buffer before each bottleneck.
    C) Control the feed rate of material to the bottleneck.
    D) Increase the bottleneck capacity as much as possible.

74. In order to back schedule, which of the following information is necessary?
   I. Quantity and due dates.
   II. Bill of materials sequence.
   III. Setup and run times for each operation.
   IV. Queue, wait, and move times.
   A) I, II, and III         B) I, III, and IV         C) II, III, and IV         D) I, II, and IV
75. Which of the following is used to rank the frequency of problems?

76. A part made on a work center has a setup time of 50 minutes and run time of two minutes per piece. An order for 600 parts needs to be processed on two machines at the same time. The machines can be set up at the same time. The elapsed operation time will be
   A) 600  B) 650  C) 1200  D) 1250

77. The capacity of which of the following determines the throughput of a manufacturing process?
   A) Initial work centers.  B) Finishing work centers.
   C) Overloaded work centers.  D) Underloaded work centers.

78. The minimum planning horizon for the MPS should be
   A) Twelve months in weekly amounts.
   B) Equal to the longest cumulative lead time.
   C) As long as it takes to acquire new capacity.
   D) Twice the longest component lead time.

79. Which of the following is used to determine the feasibility of the material requirements plan?
   A) Resource requirements planning.  B) Rough-cut capacity planning.
   C) Capacity requirements planning.  D) Work center capacity control.

80. The input rate is controlled by
   A) Material flow from suppliers.  B) Tooling requirements.
   C) Release of orders to the shop.  D) Demand from customers.
81. Input/output control is used to manage
   A) Supplier lead times.     B) Queues and lead times.
   C) Capacity planning.      D) System runtimes.

82. Which of the following combinations is BEST suited for developing customer promise dates in the
    make-to-order environment?
   A) Forward scheduling and infinite loading.
   B) Forward scheduling and finite loading.
   C) Backward scheduling and infinite loading.
   D) Backward scheduling and finite loading.

83. Often, when placing an order, a customer will ask when the order will ship. The ability to answer this
    question rests with check of the uncommitted material and available capacity. Which of the following tools
    will most often be used to answer the question "when will my order ship?"
   A) Pegging report to understand where demand is coming from.
   B) Available to promise portion of the MPS.
   C) The resource requirements at the key work centers.
   D) The ability of the supplier to provide materials within lead time.

84. Which of the following is a benefit to the supplier of a long-term customer-supplier relationship?
   A) An improved ability to plan.     B) Improved product quality.
   C) More frequent shipments.        D) Reduced transportation costs.

85. Manufacturing has primary responsibility for which of the following dimensions of quality?
   C) Conformance.            D) Aftermarket service.
86. Which of the following is an advantage of point-of-use inventory over central storage?
   A) The ease of control.   B) Reduced material handling.
   C) The ease of maintaining inventory records.   D) Reduced safety stock.

87. Many companies will call themselves market driven. This would indicate that they
   A) Develop strong advertising campaigns.
   B) Established a strong brand image in the market.
   C) Respond to the customers needs.
   D) Conduct market research.

88. An important measure of an effective quality measure should be which of the following?
   A) Easy for the user to understand.   B) Based on accounting information.
   C) Developed by the Quality Department.   D) Used to evaluate individual performance.

89. Total employee involvement will result in an increase in which of the following roles for first-line supervision?

90. Even in an intermittent manufacturing shop, certain JIT principles can be applied. Which of the following principles can be used in an intermittent manufacturing shop?
   I. Employee involvement.
   II. Total preventive maintenance.
   III. Inventory reduction.
   IV. Continuous flow lines.
   A) I and III   B) II and IV   C) I, II, and III   D) I, II, III, and IV
91. Which of the following groups should be the first to receive education on total quality management concepts?
   A) Senior management.  B) Quality inspectors.
   C) Production operators.  D) Production supervision.

92. Which of the following BEST describes the concept VMI?
   A) Consignment of the inventory.
   B) Visual management of the inventory levels.
   C) Vertical grouping of the inventory.
   D) Allowing the supplier to manage the day-to-day inventory levels.

93. Which of the following is typically characterized as an element of the supply chain?

94. In a JIT manufacturing environment, waste can be described as
   A) Component scrap.  B) Overtime.
   C) Any process which does not add value.  D) Any overhead process.

95. Which of the following would MOST likely serve as an effective measure of supplier performance?
   A) Component price.  B) Internal scrap rate.
   C) Transportation mode.  D) Delivery time.
96. Which of the following is the primary benefit of a customer partnership?
   A) Higher prices can be charged because the customer is not buying from other sources.
   B) Reduced paperwork between the two parties.
   C) Lower costs in the supply chain for both companies because of the mutual sharing of information.
   D) Higher margins for the supplier.

97. In projecting demand for a standard design commodity, which of the following factors is typically MOST important?
   A) Post-sales service.
   B) Product features.
   C) Quality controls.
   D) Competitive pricing.

98. Demand on a work center is caused by the next work center. Product is not made unless signaled by the next work center. This is called
   A) Push system.
   B) Pull system.
   C) Demand system.
   D) MRP II system.

99. Providing customers with what they want at low cost describes the relationship between which of the following?
   A) JIT and TQM.
   B) TQM and production planning.
   C) MRP II and JIT.
   D) TQM and CRP.

100. To achieve necessary quality levels in a JIT environment, quality must be
     A) Built into the product by operators.
     B) Inspected at multiple points.
     C) Ensured by the quality control lab.
     D) An inspectors function.
101. The primary advantage of the concurrent engineering process is that
   A) Inventory needs are reduced.
   B) Engineers work with other departments on projects improving communication.
   C) Project costs for the development are accurately accounted for.
   D) Product development time is reduced.

102. Which of the following is a good measure of customer focus?
   A) High organizational turnover.
   B) High quality levels.
   C) Many performance measures.
   D) Many supplier contacts.

103. The ABC Manufacturing company has cross functional teams that include manufacturing and design engineers, and representatives from marketing, finance, manufacturing, materials and suppliers. In this cooperative environment, the teams are rewarded according to their ability to bring market driven product designs to customers quickly and at a price that is possible only because they avoid unnecessary costs. This approach to new product design is known as
   A) Design for manufacturability.
   B) Quality function deployment.
   C) Voice of the customer.
   D) Engineering change management.

104. Which of the following is a major consideration when selecting a supplier?
   A) Supplier employee benefits.
   B) Supplier forecast accuracy.
   C) Supplier manufacturing reliability.
   D) Supplier pre-sales marketing success.

105. In a flow manufacturing environment, product will generally flow consistently and constantly. As a result, there is little time to do inventory transactions to record the movement of parts through the line. To overcome this, many companies record their inventory by using
   A) Pre flushing.
   B) Kanban.
   C) Cycle counts.
   D) Backflushing.
### Solution:

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