

Name :
Date :

APICS Id# :
Time :

BSC MOCK TEST

1. 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

2. A supervisor's primary role in a total employee involvement company is:

- A) Controlling.
- B) cheerleading.
- C) coaching.
- D) quality control.

3. The key driver in a Total Quality Management (TQM) company should be:

- A) lower costs.
- B) training employees.
- C) problem solving tools.
- D) customer needs.

4. Which of the following are advantages of point of use storage?

I.Ease of control

II.Material handling is reduced

III.Storage costs are reduced

IV.Material is accessible at all times

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

5. If a company is going to establish a cycle count program, a primary objective should be to:

- A) correct the inventory records.
- B) reduce the headcount.
- C) identify the causes of inventory errors.
- D) eliminate the physical inventory.

6. Which of the following best describes the ABC approach to inventory control?

- A) Maintain a high inventory of "A" parts.
- B) Have plenty of "C" parts.
- C) Keep the "B" parts to a minimum level.
- D) Always keep plenty of inventory.

7. A company's strategic plan:

- A) provides the manufacturing plan for families of end items.
- B) outlines the sales plan for the next year.
- C) is a statement of goals and objectives for a long range period.
- D) outlines new products for the next year.

8. Which of the following best describes the purpose of a distribution warehouse?

- A) A warehouse to store goods for long periods of time
- B) A storage warehouse for floor stock
- C) A warehouse to move and mix goods
- D) A supply chain warehouse for regional storage

9. A normal distribution can be graphed as a :

- A) parabolic curve.
- B) trend seasonal curve.
- C) positive bias curve.
- D) bell shaped curve.

10. 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

11. The particular channel in which goods move describes:

- A) Manufacturing channel.
- B) Marketing channel.
- C) Capacity channel.
- D) Distribution channel.

12. A company makes all decisions regarding forecasting and orders centrally for its distribution network. This company is using which of the following systems?

- A) Pull system
- B) Push system
- C) Just-in-Time
- D) Time phased order point

13. A company wants to store 15,000 cartons with 20 cartons on each pallet. The warehouse is set up to store pallets 5 high. How many pallet positions are needed?

- A) 150
- B) 500
- C) 750
- D) 3000

14. Which of the following statements would be true regarding the delivery time in an engineer to order company?

- A) Delivery time is shorter than a make-to-order company.
- B) It would be the same as a make-to-stock item.

- C) It would be longer than an assemble-to-order company.
- D) It would be shorter than an assemble-to-order company.

15. 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

16. Which of the following are advantages of using central storage?

I.Ease of control

II.Costs are reduced

III.Inventory record accuracy is easier to attain

IV.Safety stock is reduced

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

17. The Just-in-Time philosophy can be best defined as:

- A) Delivering goods just before they are needed
- B) Fulfilling customer orders just as they are needed
- C) Manufacturing without inventory
- D) Elimination of waste

18. Which of the following are objectives of inventory?

I.Maximize customer service

II.Efficient transaction

III.Low cost plan operations

IV.Minimum inventory investment

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

19. For a given product, the line haul cost is \$1.50 per mile. The product will move 400 miles. If 40,000 pounds are being shipped, what is the cost per hundred weight ?

- A) 1.00
- B) 1.50
- C) 2.00
- D) 2.50

20. The annual cost of goods sold for a company is \$40 million and the average inventory is \$10 million. By how much would the inventory need to be reduced to have annual inventory turns equal 20 turns?

- A) \$2 million
- B) \$4 million
- C) \$6 million
- D) \$8 million

21. The inventory turns ratio measures:

- A) The amount of inventory needed to support sales growth.
- B) Obsolete inventory as a percent of sales.
- C) How effectively inventory is being used.
- D) The amount of space needed to store inventory.

22. A company wants to produce 1000 units over the next four months using a level strategy. The months have 20, 21, 19 and 22 working days in each one. Based on this strategy, how much would be produced in the first month?

- A) 244
- B) 254
- C) 260
- D) 262

23. Aggregate inventory management is concerned with:

- A) Managing inventory items and how they are used.
- B) Establishing the production plan.
- C) The cost and benefits of carrying the different classes of inventory.
- D) The distribution network and the movement of inventory.

24. Which of the following would be considered part of the physical distribution system?

- A) Moving materials between work centers
- B) Receiving goods from suppliers
- C) Planning the transfer of goods to outside contractors
- D) Forecasting inventory levels to support manufacturing

25. The Toyota Motor Company identified seven sources of waste in manufacturing. Which of the following represent those sources of waste?

- I.Process**
- II.Overproduction**
- III.Wait-time**
- IV.Movement**

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

26. System nervousness is caused by:

- A) the inability of the planner to remain calm.
- B) requirements changing rapidly.
- C) constant demands by manufacturing for long production runs.
- D) purchased materials which do not arrive on time.

27. The law which states that a small percentage of the group usually accounts for a large percent of the results is which of the following?

- A) Fredo's law
- B) Newton's first law

- C) Pareto's law
- D) Nielsen's law

28. Which of the following would most likely be a dependent demand item?

- A) Safety gloves
- B) Office supplies
- C) Purchased component
- D) Item being shipped to customer

29. The basic elements of the supply chain include:

- A) supply, manufacture, distribution.
- B) design, manufacture, inventory.
- C) engineer, design, manufacture.
- D) supply, engineer, manufacture.

30. Each distribution center places orders from central supply as they are needed. This is called:

- A) pull system.
- B) push system.
- C) Just-in-Time delivery.
- D) supply chain management.

31. 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.

32. In a fixed location warehouse system, each SKU has an assigned location. While this has many positives, the negative aspect to fixed location warehousing is that:

- A) warehouses can get messy.
- B) cube utilization is poor.
- C) inventory accuracy suffers.
- D) items can be damaged in put away.

33. Quality can best be defined as:

- A) job one.
- B) meeting or exceeding the users' expectations.
- C) the best product produced.
- D) zero defects.

34. Conformance can be best described as:

- A) making the highest quality products.
- B) meeting the specified requirements.
- C) working together as a team.
- D) flowing product through cells.

35. As a company increases the number of warehouses from one to two, there is an impact on safety stock. Safety stock will:

- A) increase by a factor of 2.
- B) decrease by half.
- C) increase, and the percent can be calculated.
- D) decrease by a calculated percentage.

36. Forecasts are usually wrong but we continue to use them. They are necessary because:

- A) forecasters provide a service to the organization.
- B) forecasts are a prelude to business planning.
- C) the master production schedule (MPS) needs one.
- D) materials requirements planning (MRP) cannot operate without one.

37. Which of the following would be included in the cost of carrying inventory?

I.Heating and lighting a warehouse

II.Obsolete inventory

III.Labor to move material

IV.Damaged inventory

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

38. 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

39. 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

40. 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.

41. Planning bills can be best described as:

- A) bills of material based on forecast demand.
- B) bills of material for new products.

- C) bills of material which represent average products.
- D) bills of material for expected usage.

42. When a company has historical data available for use in forecasting future demand, the technique for utilizing this data is called:

- A) qualitative forecasting techniques.
- B) extrinsic forecasting techniques.
- C) intrinsic forecasting techniques.
- D) causal forecasting techniques.

43. 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.

44. 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.

45. The forecast for a part is 200 units per week. The actual shipments for the last 5 weeks have been 250, 260, 210, 240, and 220. If the MAD is 20, what would the tracking signal equal?

- A) 3
- B) 6
- C) 9
- D) 12

46. 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.

47. Independent demand can be defined by all of the following except:

- A) Demand not related to demand from higher level assemblies
- B) Forecasted demand
- C) Demand calculated based on present demand
- D) Demand from customer orders

48. 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) MRPII system.

49. A forecast which is exhibiting a trend will have which of the following patterns?

- A) A steady increase or decrease
- B) A consistent fluctuating pattern based on the time of year
- C) An inconsistent fluctuation in demand
- D) A wavelike fluctuation over several years

50. Which of the following would best define dependent demand?

I.Demand which is dependent on the forecast

II.Demand which is dependent on demand for a higher level assembly

III.Demand which is calculated

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

51. Which of the following best describes a master production schedule?

- A) Product families, monthly
- B) End items, monthly
- C) End items, weekly
- D) Product families, weekly

52. Which of the following statements is most correct?

- A) The MPS shows families of products.
- B) The MPS has more detail than the production plan.
- C) The production plan has more detail than the MPS.
- D) The production plan rolls up to equal the MPS.

53. A tracking signal is used to:

- A) monitor the quality of the forecast.
- B) determine the variation in the production plan.
- C) measure whether the schedule is being met.
- D) measure the material plan.

54. Which of the following best describes the Master Production Schedule?

- A) It is the actual build schedule for manufacturing.
- B) It is the final assembly schedule.
- C) It is driven by materials requirements planning.
- D) It is the planned build schedule for manufacturing.

55. 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

56. Which of the following are inputs to a realistic MPS?

- I. Production plan**
- II. Forecasts for end items**
- III. Product costs for end items**
- IV. Capacity constraints**

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

57. 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

58. In make to stock requirements, customer orders are satisfied from:

- A) available capacity.
- B) work in process inventory.
- C) finished goods inventory.
- D) raw material inventory.

59. Which of the following are strategies to use in developing a production plan?

- I. Chase strategy**
- II. Delphi strategy**
- III. Level strategy**
- IV. Backlog strategy**

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

60. 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.

61. The term value can be best defined as:

- A) total revenue of products and services.
- B) total inventory available for shipment.
- C) amount buyers are willing to pay for a product or service.
- D) gross margin on a product or service.

62. What is the Mean Absolute Deviation for the following data?

Period	1	2	3	4	5
Forecast	100	100	150	150	150
Demand	90	105	140	160	170

- A) 3
- B) 9
- C) 11
- D) 15

63. A company wants to produce at a level rate. Based on the following information, what production rate will provide a projected inventory of 20 at the end of period five?

Period	1	2	3	4	5
Forecast Demand	20	10	15	15	10
Planned Production					
Planned Inventory	10				

- A) 14
- B) 15
- C) 16
- D) 17

64. Which of the following would be included in demand management?

- I. Forecasted requirements
- II. Service parts requirements
- III. Branch warehouse requirements
- IV. Inter-plant orders

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

65. When no common unit of measure can be found for measuring capacity, which of the following would be used?

- A) Each SKU
- B) Efficiency
- C) Time
- D) Utilization

66. Suppose a manufacturer makes tables consisting of a top, four legs and two cross bars to support the table. Demand for the table is 600 per week. The table top fabricating capacity is 650 per week, the leg department can fabricate 2000 legs per week and the cross bar assembly department has a capacity of 1400 crossbars per week. What is the capacity of the factory?

- A) 500 tables
- B) 550 tables
- C) 600 tables
- D) 650 tables

67. The primary reason to use operation splitting is to:

- A) Utilize machinery more effectively.
- B) Increase manpower efficiency.
- C) Reduce the maintenance costs.
- D) Reduce lead time.

68. A company uses a critical ratio to determine the priority of jobs remaining in the factory. Currently job A-2578 at Work Center 110 is showing a critical ratio of .8. The job is:

- A) Ahead of schedule.
- B) On schedule.
- C) Behind schedule.
- D) Already late.

69. Orders which are automatically replanned by the computer are called:

- A) firm orders.
- B) scheduled receipts.
- C) net requirements.
- D) planned orders.

70. Which of the following would best describe the term standard time?

- A) Time which operators put in each day
- B) The cost of the labor to produce the part
- C) Time it takes a qualified operator to make a part
- D) The number of hours per day working at the rated efficiency

71. Which of the following describes the strategic advantage of capacity planning?

- A) It improves the flow of materials through the factory.
- B) It provides more realistic due dates to customers.
- C) It improves the scheduling of materials from suppliers.
- D) It improves scheduling performance and reduces cost.

72. The input rate is controlled by the:

- A) material flow from suppliers.
- B) tooling requirements.
- C) release of orders to the shop.
- D) demand from customers.

73. The primary reason to use operation overlapping is to reduce the:

- A) overall manufacturing lead time.
- B) cost of purchased components.
- C) machine maintenance.
- D) labor contribution.

74. The total volume of production passing through a facility is defined as:

- A) Total output.
- B) Finished goods production.
- C) Load.
- D) Throughput.

75. A work center has 300 available hours, a utilization rate of 80% and an efficiency rate of 90%. What is the rated capacity of the work center?

- A) 216 hours
- B) 240 hours

- C) 270 hours
- D) Not enough information to determine

76. The function of maintaining a process within a given range of capability is called:

- A) Process quality management.
- B) Total process assurance.
- C) Process control.
- D) Customer satisfaction.

77. When does a first-article inspection occur?

- A) After the setup is complete
- B) When the order is released
- C) After the machine is maintained
- D) After training has occurred

78. All of the following are benefits of subcontracting EXCEPT:

- A) Excess capacity is not left unused
- B) Companies can produce at minimum levels, reducing facilities cost.
- C) Cost can be minimized.
- D) Overtime can be reduced.

79. The MRP system has given you, the planner, the message, " Expedite Order 45367" which happens to be for a purchased part. You should:

- A) Immediately change the order to the recommended date.
- B) Move the order to a later date.
- C) Contact the supplier to see if they can meet the new delivery date.
- D) Leave the order as is.

80. The concept of linearity can be best described as:

- A) Balancing the work at each work station.
- B) Capacity available for the line to work.
- C) Scheduling jobs with similar setup times.
- D) Achieving the plan; no more, no less.

81. The quantity calculated as available-to-promise really is meant to answer the question:

- A) When can you ship the product?
- B) What available capacity is left?
- C) What is the projected available inventory?
- D) How much is on hand to ship?

82. A manufacturer makes tables consisting of a top, 4 legs, and 4 top trims. Demand for the tables is 600 per week. The capacity for the tops is 700 per week, the capacity for legs is 2,000 per week, and the capacity for the trim is 2,500 per week. What is the capacity to produce tables?

- A) 400
- B) 500
- C) 600
- D) 1000

83. 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

84. 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

85. Which of the following would be true in regards to bottleneck work centers?

- A) Capacity is greater than the preceding work center
- B) Throughput is controlled by the bottleneck
- C) Demand is less than the capacity
- D) Bottlenecks eventually go away

86. Work center load can be best defined as:

- A) The schedule of jobs released to a work center.
- B) A chart to line balance production.
- C) Production at a constant quantity.
- D) the amount of work released to a work center.

87. 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

88. A customer has called and requested an order be delivered in one month. Based on this delivery date, production control has determined the order must start in one week. The method of scheduling they used to determine this is:

- A) finite scheduling.
- B) infinite scheduling.
- C) backward scheduling.
- D) forward scheduling.

89. 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.
- C) Work center overlapping.

D) Work center splitting.

90. The primary method of communicating start and completion dates to the manufacturing departments is the:

- A) stock status report.
- B) input/output report.
- C) dispatch list.
- D) resource planning report.

91. Which of the following is true regarding priority?

- A) It refers to the ability of the plan to meet the demand.
- B) It refers to the capacity to meet production.
- C) It refers to purchasing's ability to get raw materials in a timely manner.
- D) It refers to maintaining the correct due dates on orders.

92. The link between production planning and what manufacturing actually builds is called the:

- A) business plan.
- B) production plan.
- C) final assembly schedule.
- D) master production schedule.

93. Of all the times associated with manufacturing lead times, which generally takes the most time in intermittent manufacturing?

- A) Run time
- B) Setup time
- C) Queue time
- D) Move time

94. A shop packet will contain all of the following except:

- A) Engineering drawings
- B) Bill of materials
- C) Route sheets
- D) Customer information

95. Which of the following are inputs to the Material Requirements Planning system?

I. Master Production Schedule

II. Inventory records

III. Production plan

IV. Bill of materials

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

96. 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

97. The basic purpose of inventory is:

- A) to decouple supply and demand.
- B) to supply customers from stock.
- C) to provide work in process in manufacturing.
- D) to provide time for quality testing.

98. A blanket order in purchasing can be best described as a(n):

- A) order covering a variety of suppliers.
- B) group of operations.
- C) long term commitment to a supplier.
- D) supplies order.

99. The decision of when to order raw materials is the responsibility of:

- A) manufacturing planning.
- B) purchasing.
- C) engineering.
- D) sales.

100. Capacity requirements planning (CRP) is concerned with which of the following?

I.Labor hours for a product family

II.Individual orders and individual work centers

III.Calculating work center loads

IV.Validating the capacity for the master production schedule

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

101. A functional specification tells purchasing:

- A) when to buy.
- B) how much to buy.
- C) where to buy.
- D) what to buy.

102. In a typical sourcing situation, the buyer attempts to buy the product or service for a fair price. The difficulty is in determining the fair price. Prices have upper and lower limits. The lower pricing limit is determined by the:

- A) engineers.
- B) government.
- C) sellers.
- D) market.

103. Which of the following would best describe a commodity?

- A) Price is based on the catalogue.
- B) Price can be negotiated aggressively.
- C) Price is set by market supply and demand and can fluctuate widely.
- D) Price is set by a willing buyer and seller.

104. Sometimes a periodic review system is the most effective method to manage inventory. For which of the following conditions would this method be used?

- I.Raw materials required in production**
- II.Small issues from inventory and transactions are expensive**
- III.Order costs are small**
- IV.Many items are ordered together**

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

105. Based on the following information, what is the order point?

Lead time = 3 weeks

Demand/week = 200

Safety stock = 100

- A) 200
- B) 300
- C) 600
- D) 700