

## CHAPTER 2: ACCOUNTING FOR MATERIALS

Student: \_\_\_\_\_

1. An effective cost control system should include:
  - A. An established plan of objectives and goals to be achieved.
  - B. Regular reports showing the difference between goals and actual performance.
  - C. Specific assignment of duties and responsibilities.
  - D. All of these are correct.
2. To effectively control materials, a business must maintain:
  - A. Limited access.
  - B. Combination of duties.
  - C. Safety stock.
  - D. None of these are correct.
3. Janet is the purchasing agent at Frameco Manufacturing. Her duties include vendor selection and ordering materials. Due to a recent economic downturn and resulting cut backs, Janet has been assigned the additional duty of preparing receiving reports after comparing the goods received to the purchase order. This is an example of:
  - A. unlimited access to materials.
  - B. independence of assigned functions.
  - C. misappropriation of assets.
  - D. a lack of segregation of duties.
4. Marley Company hired a consultant to help improve its operations. The consultant's report stated that Marley's inventory levels are excessive and cited several negative consequences to Marley as a result. Which of the following was **not** cited in the report?
  - A. Possible other uses for working capital now tied up in inventory
  - B. Production stoppages due to parts not being available
  - C. Higher property taxes and insurance costs
  - D. Large quantities of obsolete materials
5. The data used to calculate the order point include all of the following **except**:
  - A. the costs of placing an order.
  - B. the rate at which the material will be used.
  - C. the estimated time interval between the placement and receipt of an order.
  - D. the estimated minimum level of inventory needed to protect against stockouts.

6. Murphy Company uses 2,000 yards of material each day to make hats. It usually takes five days from the time Murphy orders the material to when it is received. If Murphy's desired safety stock is 6,000 yards, what is Murphy's order point?
- A. 6,000 yards
  - B. 8,000 yards
  - C. 10,000 yards
  - D. 16,000 yards
7. What is the objective of the economic order quantity (EOQ) model for inventory?
- A. To minimize order costs or carrying costs, whichever are higher
  - B. To minimize order costs or carrying costs and maximize the rate of inventory turnover
  - C. To minimize the total order costs and carrying costs over a period of time
  - D. To order sufficient quantity to economically meet the next period's demand
8. Order costs would include all of the following **except**:
- A. Receiving clerk's wages.
  - B. Storeroom keeper's wages.
  - C. Purchasing department's telephone bill.
  - D. Transportation in.
9. Expected annual usage of a particular raw material is 1,200,000 units, and standard order size is 10,000 units. The invoice cost of each unit is \$145, and the cost to place one purchase order is \$105. The estimated annual order cost is:
- A. \$12,000.
  - B. \$17,400.
  - C. \$12,600.
  - D. \$800,000.
10. Carrying costs would include all of the following **except**:
- A. Warehouse rent.
  - B. Inspection employees' wages.
  - C. Losses due to obsolescence.
  - D. Property taxes.

11. The following data refer to various annual costs relating to the inventory of a single-product company that requires 10,000 units per year:

|                                                                       |                       |
|-----------------------------------------------------------------------|-----------------------|
|                                                                       | <u>Cost per unit</u>  |
| Order cost                                                            | \$ .05                |
| Transportation-in on purchases                                        | .18                   |
| Storage                                                               | .16                   |
| Insurance                                                             | .10                   |
|                                                                       | <u>Total per year</u> |
| Interest that could have been earned on alternate investment of funds | \$800                 |

What is the annual carrying cost per unit?

- A. \$ .21  
B. \$ .29  
C. \$ .34  
D. \$ .44
12. The following data pertains to Western Company's materials inventory:
- |                                            |        |
|--------------------------------------------|--------|
| Number of pounds required annually         | 16,000 |
| Cost of placing an order                   | \$20   |
| Annual carrying cost per pound of material | \$4    |
- What is Western Company's EOQ?
- A. 4,000 pounds  
B. 800 pounds  
C. 400 pounds  
D. 200 pounds
13. Expected annual usage of a particular raw material is 180,000 units, and standard order size is 12,000 units. The invoice cost of each unit is \$300, and the cost to place one purchase order is \$80. Assuming the company does **not** maintain safety stock, the average inventory is:
- A. 10,000 units.  
B. 7,500 units.  
C. 15,000 units.  
D. 6,000 units.
14. Arwen Company has correctly computed its economic order quantity at 500 units; however, management feels it would rather order in quantities of 600 units. How should Arwen's total annual order cost and total annual carrying cost for an order quantity of 600 units compare to the respective amounts for an order quantity of 500 units?
- A. Higher total order cost and lower total carrying cost  
B. Lower total order cost and higher total carrying cost  
C. Higher total order cost and higher total carrying cost  
D. Lower total order cost and lower total carrying cost

15. The personnel involved in the physical control of materials includes all of the following **except** the:
- A. Purchasing agent.
  - B. Receiving clerk.
  - C. Cost accountant.
  - D. Production department supervisor.
16. The employee who is responsible for preparing purchase requisitions is most likely the:
- A. Storeroom keeper.
  - B. Purchasing agent.
  - C. Production supervisor.
  - D. Receiving clerk.
17. Sam Jones works at Seeker, Inc. Sam's duties include identifying where materials can be obtained most economically, placing orders and verifying invoices and approving them for payment. Sam is a(n):
- A. receiving clerk.
  - B. accounts payable clerk.
  - C. purchasing agent.
  - D. production supervisor.
18. The form used to notify the purchasing agent that additional materials are needed is known as a:
- A. Purchase order.
  - B. Vendor's invoice.
  - C. Receiving report.
  - D. Purchase requisition.
19. The form prepared by the purchasing agent and sent to the vendor to obtain materials is known as a:
- A. Materials requisition.
  - B. Purchase requisition.
  - C. Purchase order.
  - D. Vendor's invoice.
20. A receiving report would include all of the following information **except**:
- A. What the shipment contained.
  - B. The purchase order number.
  - C. The customer.
  - D. The date the materials were received.

21. Listed below are steps of purchasing and receiving materials:

1. The receiving clerk prepares a receiving report.
2. Purchase requisitions are prepared to notify the purchasing agent that additional materials are needed.
3. The purchase of merchandise is recorded by the accounting department.
4. The purchasing agent completes a purchase order.

In which order would these events typically happen?

- A. 4, 2, 3, 1
- B. 2, 4, 3, 1
- C. 2, 4, 1, 3
- D. 4, 2, 1, 3

22. Listed below are steps of procuring materials for production:

1. The receiving clerk checks the quantity and quality of incoming materials.
2. The purchasing agent issue the purchase order to the vendor.
3. The production floor supervisor issues a materials requisition.
4. The storeroom clerk issues a purchase requisition.

In which order would these events typically happen?

- A. 3, 2, 4, 1
- B. 3, 4, 2, 1
- C. 2, 1, 3, 4
- D. 4, 2, 1, 3

23. The duties of the purchasing agent would include all of the following **except**:

- A. Placing purchase orders.
- B. Counting and identifying materials received.
- C. Compiling information that identifies vendors and prices.
- D. Verifying invoices and approving them for payment.

24. The form that serves as authorization to withdraw materials from the storeroom is known as the:

- A. Materials requisition.
- B. Purchase order.
- C. Purchase requisition.
- D. Returned materials report.

25. If a company receives a larger quantity of goods than had been ordered and keeps the excess for future use, a(n) \_\_\_\_\_ is prepared to notify the vendor of the amount of increase to accounts payable in the invoice.
- A. credit memorandum  
 B. return shipping order  
 C. debit memorandum  
 D. additional purchase order
26. The Sully Company uses an industrial chemical, XRG, in a manufacturing process. Information as to balances on hand, purchases, and requisitions of XRG is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of<br/>Kilograms</u> | <u>Price per<br/>Kilogram</u> | <u>Balance of<br/>Kilograms</u> |
|-------------|--------------------|--------------------------------|-------------------------------|---------------------------------|
| Jan. 1      | Beginning balance  | 1,000                          | \$2.00                        | 1,000                           |
| Jan. 24     | Purchased          | 2,500                          | \$2.25                        | 3,500                           |
| Feb. 8      | Issued             | 700                            |                               | 2,800                           |
| Mar. 16     | Issued             | 1,200                          |                               | 1,600                           |
| Jun. 11     | Purchased          | 1,500                          | \$2.75                        | 3,100                           |
| Aug. 18     | Issued             | 800                            |                               | 2,300                           |
| Sep. 6      | Issued             | 1,600                          |                               | 700                             |
| Oct. 15     | Purchased          | 2,000                          | \$2.80                        | 2,700                           |
| Dec. 29     | Issued             | 600                            |                               | 2,100                           |

If a perpetual inventory record of XRG is maintained on a FIFO basis, the March 16 issue will consist of:

- A. 300 kilograms @ \$2.00 and 900 kilograms @ \$2.25.  
 B. 1,000 kilograms @ \$2.00 and 200 kilograms @ \$2.25.  
 C. 1,200 kilograms @ \$2.25.  
 D. 700 kilograms @ \$2.00 and 500 kilograms @ \$2.25.

27. The Benchley Company uses metal grates when assembling appliances. Information as to balances on hand, purchases, and requisitions of the grates is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 150                    | \$2.80            | 150                     |
| Jan. 24     | Purchased          | 450                    | \$3.10            | 600                     |
| Feb. 8      | Issued             | 120                    |                   | 480                     |
| Mar. 16     | Issued             | 210                    |                   | 270                     |
| Jun. 11     | Purchased          | 225                    | \$3.24            | 495                     |
| Aug. 18     | Issued             | 195                    |                   | 300                     |
| Sep. 6      | Issued             | 165                    |                   | 135                     |
| Oct. 15     | Purchased          | 225                    | \$3.40            | 360                     |
| Dec. 29     | Issued             | 210                    |                   | 150                     |

If a perpetual inventory record of the metal grates is maintained on a FIFO basis, the September 6 issue will consist of:

- A. 15 units @ \$2.80, 120 units @ \$3.10 and 30 units @ \$3.24.
  - B. 75 units @ \$2.80 and 90 units @ \$3.10.
  - C. 165 units @ \$3.10.
  - D. 75 units @ \$3.10 and 90 units @ \$3.24.
28. The Bisset Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

#### Raw Material A

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 100                    | \$1.40            | 100                     |
| Jan. 24     | Purchased          | 300                    | \$1.55            | 400                     |
| Feb. 8      | Issued             | 80                     |                   | 320                     |
| Mar. 16     | Issued             | 140                    |                   | 180                     |
| Jun. 11     | Purchased          | 150                    | \$1.62            | 330                     |
| Aug. 18     | Issued             | 130                    |                   | 200                     |
| Sep. 6      | Issued             | 110                    |                   | 90                      |
| Oct. 15     | Purchased          | 150                    | \$1.70            | 240                     |
| Dec. 29     | Issued             | 140                    |                   | 100                     |

If a perpetual inventory record of Raw Material A is maintained on a FIFO basis, 200 units on hand on August 18 will consist of:

- A. 100 units @ \$1.40, 80 units @ \$1.55 and 20 units @ \$1.62.
- B. 100 units @ \$1.55 and 100 units @ \$1.62.
- C. 150 units @ \$1.62 and 50 units @ \$1.55.
- D. 200 units @ \$1.55.

29. The Benchley Company uses metal grates when assembling appliances. Information as to balances on hand, purchases, and requisitions of the grates is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 150                    | \$2.80            | 150                     |
| Jan. 24     | Purchased          | 450                    | \$3.10            | 600                     |
| Feb. 8      | Issued             | 120                    |                   | 480                     |
| Mar. 16     | Issued             | 210                    |                   | 270                     |
| Jun. 11     | Purchased          | 225                    | \$3.24            | 495                     |
| Aug. 18     | Issued             | 195                    |                   | 300                     |
| Sep. 6      | Issued             | 165                    |                   | 135                     |
| Oct. 15     | Purchased          | 225                    | \$3.40            | 360                     |
| Dec. 29     | Issued             | 210                    |                   | 150                     |

If a perpetual inventory record of the metal grates is maintained on a FIFO basis, what costs are assigned to the 150 units in ending inventory?

- A. 150 units @ \$3.40
  - B. 15 units @ \$3.40 and 135 units @ \$3.24.
  - C. 150 units @ \$2.80.
  - D. 15 units @ \$3.40 and 135 units @ \$2.80.
30. The inventory method which results in the prices paid for earliest purchases assigned to cost of goods sold is:
- A. First-in, first-out.
  - B. Last-in, first-out.
  - C. Last-in, last-out.
  - D. Moving average.
31. The inventory method which results in the most recent costs being assigned to inventory on hand at the end of the period is:
- A. First-in, first-out.
  - B. Last-in, first-out.
  - C. Last-in, last-out.
  - D. Moving average.

32. Filmac, Inc. uses speakers when assembling computers. Information as to balances on hand, purchases, and requisitions of speakers is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 200                    | \$14.00           | 200                     |
| Jan. 15     | Purchased          | 100                    | \$16.00           | 300                     |
| Feb. 24     | Issued             | 50                     |                   | 250                     |
| Mar. 8      | Issued             | 70                     |                   | 180                     |
| Jun. 23     | Purchased          | 100                    | \$17.00           | 280                     |
| Aug. 8      | Issued             | 80                     |                   | 200                     |
| Sep. 29     | Issued             | 30                     |                   | 170                     |
| Oct. 7      | Purchased          | 100                    | \$19.00           | 270                     |
| Dec. 16     | Issued             | 50                     |                   | 220                     |

If a perpetual inventory record of speakers is maintained on a LIFO basis, the March 8 issue will consist of:

- A. 20 units @ \$14.00 and 50 units @ \$16.00.
  - B. 70 units @ \$14.00.
  - C. 50 units @ \$16.00 and 20 units @ \$14.00.
  - D. 70 units @ \$16.00.
33. The Bisset Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

#### Raw Material A

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 100                    | \$1.40            | 100                     |
| Jan. 24     | Purchased          | 300                    | \$1.55            | 400                     |
| Feb. 8      | Issued             | 80                     |                   | 320                     |
| Mar. 16     | Issued             | 140                    |                   | 180                     |
| Jun. 11     | Purchased          | 150                    | \$1.62            | 330                     |
| Aug. 18     | Issued             | 130                    |                   | 200                     |
| Sep. 6      | Issued             | 110                    |                   | 90                      |
| Oct. 15     | Purchased          | 150                    | \$1.70            | 240                     |
| Dec. 29     | Issued             | 140                    |                   | 100                     |

If a perpetual inventory record of Raw Material A is maintained on a LIFO basis, the September 6 issue will consist of:

- A. 80 units @ \$1.55, 20 units @ \$1.62 and 10 units @ \$1.40.
- B. 110 units @ \$1.55.
- C. 50 units @ 1.55 and 60 units @ 1.62.
- D. 20 units @ \$1.62 and 90 units @ \$1.55.

34. Pierce, Inc. uses sulfuric acid in a manufacturing process. Information as to balances on hand, purchases, and requisitions of acid is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of Gallons</u> | <u>Price per<br/>Gallon</u> | <u>Balance of Gallons</u> |
|-------------|--------------------|--------------------------|-----------------------------|---------------------------|
| Jan. 1      | Beginning balance  | 10,000                   | \$.50                       | 10,000                    |
| Feb. 24     | Purchased          | 30,000                   | \$.65                       | 40,000                    |
| Mar. 8      | Issued             | 8,000                    |                             | 32,000                    |
| Apr. 16     | Issued             | 14,000                   |                             | 18,000                    |
| May. 11     | Purchased          | 15,000                   | \$.72                       | 33,000                    |
| Jul. 18     | Issued             | 13,000                   |                             | 20,000                    |
| Oct. 6      | Issued             | 11,000                   |                             | 9,000                     |
| Nov. 15     | Purchased          | 15,000                   | \$.78                       | 24,000                    |
| Nov. 29     | Issued             | 14,000                   |                             | 10,000                    |

If a perpetual inventory record of Raw Material A is maintained on a LIFO basis, the 20,000 units in inventory at July 18 will consist of:

- A. 5,000 units @ \$.72 and 15,000 units @ \$.65.
  - B. 10,000 units @ \$.50 and 10,000 units @ \$.65.
  - C. 2,000 units @ \$.72, 8,000 units @ \$.65 and 10,000 units @ \$.50.
  - D. 10,000 units @ \$.50, 6,000 units @ \$.65 and 4,000 units @ \$.72.
35. The inventory method which results in the most recent cost being assigned to cost of goods sold is:
- A. First-in, first-out.
  - B. Last-in, first-out.
  - C. Last-in, last-out.
  - D. Moving average.
36. The inventory method which results in the prices paid for the earliest purchases being assigned to inventory on hand at the end of the period is:
- A. First-in, first-out.
  - B. Last-in, first-out.
  - C. Last-in, last-out.
  - D. Moving average.

37. The Bisset Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

Raw Material A

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 100                    | \$1.40            | 100                     |
| Jan. 24     | Purchased          | 300                    | \$1.55            | 400                     |
| Feb. 8      | Issued             | 80                     |                   | 320                     |
| Mar. 16     | Issued             | 140                    |                   | 180                     |
| Jun. 11     | Purchased          | 150                    | \$1.62            | 330                     |
| Aug. 18     | Issued             | 130                    |                   | 200                     |
| Sep. 6      | Issued             | 110                    |                   | 90                      |
| Oct. 15     | Purchased          | 150                    | \$1.70            | 240                     |
| Dec. 29     | Issued             | 140                    |                   | 100                     |

If a perpetual inventory record of Raw Material A is maintained on a moving average basis, the 140 units issued on March 16 will have a unit cost of (round to 3 decimal places):

- A. \$1.513.
  - B. \$1.475.
  - C. \$1.55.
  - D. \$1.438.
38. The Kennedy Company uses throttles in its assembly of lawn mowers. Information as to balances on hand, purchases, and requisitions of throttles is given in the following table.

| <u>Date</u> | <u>Transaction</u> | <u>Number of Units</u> | <u>Unit Price</u> | <u>Balance of Units</u> |
|-------------|--------------------|------------------------|-------------------|-------------------------|
| Jan. 1      | Beginning balance  | 50                     | \$2.50            | 50                      |
| Jan. 20     | Purchased          | 150                    | \$3.00            | 200                     |
| Feb. 3      | Issued             | 40                     |                   | 160                     |
| Mar. 25     | Issued             | 70                     |                   | 90                      |
| Jun. 14     | Purchased          | 75                     | \$4.00            | 165                     |
| Aug. 27     | Issued             | 65                     |                   | 100                     |
| Sep. 16     | Issued             | 55                     |                   | 45                      |
| Oct. 7      | Purchased          | 75                     | \$4.50            | 120                     |
| Dec. 13     | Issued             | 70                     |                   | 50                      |

If a perpetual inventory record of throttles is maintained on a moving average basis, the 165 items in inventory on June 14 will have a unit cost of (rounded to three decimal places):

- A. \$3.438.
- B. \$3.167.
- C. \$3.386.
- D. \$2.875.

39. In a period of rising prices, the use of which of the following cost flow methods would result in the lowest tax liability?
- A. FIFO
  - B. LIFO
  - C. Weighted average cost
  - D. Moving average cost
40. In a period of rising prices, the use of which of the following cost flow methods would result in the lowest cost of goods sold?
- A. FIFO
  - B. LIFO
  - C. Weighted average cost
  - D. Moving average cost
41. When selecting a method of inventory costing, a company must consider all of the following **except**:
- A. federal and state income tax regulations.
  - B. current economic conditions.
  - C. the flow of materials.
  - D. its rate of inventory turnover.
42. At the end of the period, the balance in the Materials account should represent
- A. the cost of materials purchased.
  - B. the cost of materials on hand.
  - C. the cost of materials issued into production.
  - D. the cost of materials included in Work in Process and Finished Goods.
43. The general ledger entry to record the purchase of materials is:
- A. Debit-Purchases Received  
Credit-Purchase Orders Outstanding
  - B. Debit-Materials  
Credit-Purchase Orders Outstanding
  - C. Debit-Purchases Received  
Credit-Accounts Payable
  - D. Debit-Materials  
Credit-Accounts Payable

44. The journal entry to record undamaged direct materials returned to the storeroom would be:
- A. Debit - Materials  
Credit - Finished Goods
  - B. Debit - Factory Overhead  
Credit - Work in Process
  - C. Debit - Materials  
Credit - Factory Overhead
  - D. Debit - Materials  
Credit - Work in Process
45. If the amount of materials on hand at the end of the period is less than the control account balance, the control account balance should be decreased by the following entry:
- A. Debit - Work in Process  
Credit - Materials
  - B. Debit - Materials  
Credit - Factory Overhead
  - C. Debit - Materials  
Credit - Work in Process
  - D. Debit - Factory Overhead  
  
Credit - Materials
46. Inventory levels for firms using JIT inventory systems compared to firms not using JIT will be:
- A. Higher for both work in process and finished goods.
  - B. Higher for work in process and finished goods but lower for raw materials.
  - C. Lower for raw materials, work in process, and finished goods.
  - D. Higher for finished goods but lower for raw materials and work in process.
47. Just-in-time production techniques:
- A. Require inventory buffers between work centers.
  - B. Were first utilized by U.S. manufacturers and later exported to Japan.
  - C. Produce goods for inventory with the hope that demand for these goods will then be created.
  - D. Require a high degree of cooperation and coordination between supplier and manufacturer.
48. In a JIT system, reducing throughput time is possible because:
- A. there are fewer materials used in the process.
  - B. there are more workers involved in the process.
  - C. there are more supervisors, so a better job is done of directing plant activities.
  - D. there are fewer operations such as moving and storing inventories that do not add value to the product.

49. Polk, Inc. produces 3,000 hammers each day. The average number of units in work in process is 4,500, having an average cost of \$10,000. The annual carrying costs relating to inventory are 15%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory floor. What is the current throughput time?

- A. Eight hours
- B. Sixteen hours
- C. One day
- D. One and one half days

50. Harrison Industries produces 4,000 lunch boxes each day. The average number of units in work in process is 12,000, having an average cost of \$60,000. The annual carrying costs related to inventory are 10%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory floor. What would the throughput time be if Harrison implements the recommended changes?

- A. Twelve hours
- B. One day
- C. Two days
- D. Three days

51. Taft Company produces 5,000 pallets each day. The average number of units in work in process is 10,000, having an average cost of \$35,000. The annual carrying costs related to inventory are 20%.

Consultants have determined that the work in process could be reduced by as much as 25% by rearranging the factory floor. What would the throughput time be if Harrison implements the recommended changes?

- A. Twelve hours
- B. One day
- C. One and one-half days
- D. Two days

52. Harrison Industries produces 4,000 lunch boxes each day. The average number of units in work in process is 12,000, having an average cost of \$60,000. The annual carrying costs related to inventory are 10%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory floor. What would the reduction in annual carrying costs be if Harrison is able to implement the recommended changes?

- A. \$2,000
- B. \$1,500
- C. \$6,000
- D. \$4,000

53. The accounting system used with JIT manufacturing is called:
- A. Backflush costing.
  - B. The push system.
  - C. Perpetual inventory costing.
  - D. First-in, first-out.
54. In a backflush accounting system, a single account is used for the following:
- A. Work in process and finished goods inventories.
  - B. Finished goods inventories and cost of goods sold.
  - C. Factory overhead and raw materials.
  - D. Raw materials and work in process inventories.
55. In a backflush accounting system, a single account is used for the following:
- A. Work in process and finished goods inventories.
  - B. Finished goods inventories and cost of goods sold.
  - C. Factory overhead and raw materials.
  - D. Labor and overhead.
56. Which of the following is **not** true about backflush costing?
- A. Different companies may choose different trigger points.
  - B. Production costs are attached to products as they move through work in process.
  - C. A single account is used for raw and in-process materials because materials are issued to production when received from the supplier.
  - D. Direct labor is usually insignificant in a highly automated system, so is not cost effective to account for it separately.
57. Under a backflush accounting system, the following entry is made when products are completed:
- A. Debit-Finished Goods  
Credit-Work In Process
  - B. Debit-Cost of Goods Sold  
Credit-Raw and In Process  
Credit-Conversion Costs
  - C. Debit-Finished Goods  
Credit-Raw and In Process  
Credit-Conversion Costs
  - D. Debit-Cost of Goods Sold  
Credit-Finished Goods
58. All of the following methods may be used to account for the revenue from scrap sales **except**:
- A. Credit Factory Overhead, if the scrap cannot be identified with a specific job.
  - B. Credit Materials, if the scrap would have been able to be recycled.
  - C. Credit Work in Process, if the scrap is identified with a specific job.
  - D. Credit Scrap Revenue, which is included in the "Other Income" section of the income statement.

59. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 wagons that were sold to a jobber for \$6,000.

|                  |             |
|------------------|-------------|
| Direct materials | \$24        |
| Direct labor     | 18          |
| Factory overhead | <u>14</u>   |
|                  | <u>\$56</u> |

Assume that the spoilage loss is charged to all production during August. What would be the journal entry to record the spoilage?

- A. Factory Overhead            11,200  
    Work in Process            11,200
- B. Spoiled Goods Inventory    6,000  
    Work in Process            6,000
- C. Spoiled Goods Inventory    6,000  
    Factory Overhead          5,200  
    Work in Process            11,200
- D. Spoiled Goods Inventory    11,200  
    Factory Overhead          11,200

60. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for \$6,000.

|                  |             |
|------------------|-------------|
| Direct materials | \$24        |
| Direct labor     | 18          |
| Factory overhead | <u>14</u>   |
|                  | <u>\$56</u> |

Assume that the spoilage loss is attributable to the exacting specifications of Job 401 and is charged to this specific job. What would be the journal entry to record the spoilage?

- A. Factory Overhead            6,000  
    Work in Process            6,000
- B. Spoiled Goods Inventory    6,000  
    Work in Process            6,000
- C. Spoiled Goods Inventory    6,000  
    Factory Overhead          5,200  
    Work in Process            11,200
- D. Spoiled Goods Inventory    6,000  
    Factory Overhead          6,000

61. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for \$6,000.

|                  |             |
|------------------|-------------|
| Direct materials | \$24        |
| Direct labor     | 18          |
| Factory overhead | <u>14</u>   |
|                  | <u>\$56</u> |

Assume that spoilage loss is attributable to the exacting specifications of Job 401 and is charged to this specific job. What would be the unit cost of the good wagons produced on Job 401?

- A. \$56.00  
 B. \$58.60  
 C. \$53.00  
 D. \$48.18
62. During March, Hart Company incurred the following costs on Job 122 for the manufacture of 200 motors:

|                                     |                |
|-------------------------------------|----------------|
| Original cost accumulation:         |                |
| Direct materials                    | \$2,600        |
| Direct labor                        | 900            |
| Factory overhead                    | <u>1,350</u>   |
|                                     | <u>\$4,850</u> |
| Direct costs of reworking 10 units: |                |
| Direct materials                    | \$ 100         |
| Direct labor                        | 180            |
| Factory overhead                    | <u>270</u>     |
|                                     | <u>\$ 550</u>  |

Assume the rework costs are to be spread over all jobs that go through the production cycle. What is the journal entry needed to record the rework costs?

- A. Work in Process           550  
     Materials               100  
     Payroll                 180  
     Factory Overhead           270
- B. Materials               100  
     Payroll                 180  
     Factory Overhead           270  
     Work in Process           550
- C. Factory Overhead       550  
     Materials               100  
     Payroll                 180  
     Factory Overhead           270
- D. Spoiled Goods Inventory   550  
     Work in Process           550

63. During April, Hisch Company incurred the following costs on Job A42 for the manufacture of 400 bookcases:

Original cost accumulation:

|                  |                 |
|------------------|-----------------|
| Direct materials | \$ 4,200        |
| Direct labor     | 2,500           |
| Factory overhead | <u>4,500</u>    |
|                  | <u>\$11,500</u> |

Direct costs of reworking 15 units:

|                  |               |
|------------------|---------------|
| Direct materials | \$ 150        |
| Direct labor     | 90            |
| Factory overhead | <u>180</u>    |
|                  | <u>\$ 420</u> |

If the defects resulted from the exacting specifications of the order, what is the journal entry needed to record the rework costs?

- A. Work in Process           420  
     Materials               150  
     Payroll                 90  
     Factory Overhead           180
- B. Materials               150  
     Payroll                 90  
     Factory Overhead           180  
     Work in Process           420
- C. Factory Overhead       420  
     Materials               150  
     Payroll                 90  
     Factory Overhead           180
- D. Spoiled Goods Inventory   420  
     Work in Process           420

64. During March, Hart Company incurred the following costs on Job 122 for the manufacture of 200 motors:

Original cost accumulation:

|                  |                |
|------------------|----------------|
| Direct materials | \$2,600        |
| Direct labor     | 900            |
| Factory overhead | <u>1,350</u>   |
|                  | <u>\$4,850</u> |

Direct costs of reworking 10 units:

|                  |               |
|------------------|---------------|
| Direct materials | \$ 100        |
| Direct labor     | 180           |
| Factory overhead | <u>270</u>    |
|                  | <u>\$ 550</u> |

The rework costs were attributable to the exacting specifications of Job 122, and the full rework costs were charged to this specific job. What is the cost per finished unit of Job 122?

- A. \$25.00  
B. \$23.50  
C. \$27.00  
D. \$24.00
65. Xander Company anticipates that usage of Component T will be 100 units daily, which equates to around 25,000 for the year. The material is expected to cost \$5 per unit. Once an order is placed with its vendor, it takes five days to receive the goods, and the cost of placing each order is \$50. As a result, Xander keeps 1,000 units on hand to avoid stockouts. The carrying cost associated with each unit is \$10.
- a. Compute the order point.  
b. Determine the most economical order quantity.

66. The Reddog Company predicts that 3,200 units of material will be used during the year. The expected daily usage is 15 units, there is an expected lead time of 10 days, and there is a safety stock of 200 units. The material is expected to cost \$4 per unit. It is estimated that it will cost \$25 to place each order. The annual carrying cost is \$1 per unit.

- a. Compute the order point.
- b. Determine the most economical order quantity by use of the formula.
- c. Compute the total cost of ordering and carrying at the EOQ point.

67. For the following materials control forms, please indicate the following:

- a. who prepares the form;
- b. who receives the form; and
- c. the form's intended purpose.

1. Purchase Requisition
2. Materials Requisition
3. Receiving Report
4. Purchase Order
5. Debit/Credit Memo

68. The materials account of the Lankford Company reflected the following changes during January:

|                      |                  |
|----------------------|------------------|
| Balance, January 1   | 190 units @ \$30 |
| Received, January 5  | 130 units @ \$32 |
| Issued, January 18   | 240 units        |
| Received, January 20 | 210 units @ \$35 |
| Issued, January 30   | 70 units         |

Assuming that Lankford Company maintains perpetual inventory records, calculate the cost of the ending inventory at January 31 and the cost of the units issued in January using the FIFO method.

69. The materials account of Hetzer Industries reflected the following changes during May:

|                  |                  |
|------------------|------------------|
| Balance, May 1   | 180 units @ \$30 |
| Received, May 2  | 60 units @ \$32  |
| Issued, May 4    | 80 units         |
| Received, May 27 | 100 units @ \$34 |
| Issued, May 31   | 150 units        |

Assuming that Hetzer maintains perpetual inventory records, calculate the cost of the ending inventory at May 31 and the cost of the units issued in May using the LIFO method.

70. The materials account of the Herbert Company reflected the following changes during August:

|                     |                  |
|---------------------|------------------|
| Balance, August 1   | 18 units @ \$200 |
| Received, August 2  | 6 units @ \$210  |
| Issued, August 8    | 8 units          |
| Received, August 15 | 10 units @ \$222 |
| Issued, August 27   | 15 units         |

Assuming that Herbert Company maintains perpetual inventory records, calculate the cost of the ending inventory at August 31 and the cost of the units issued in August using the moving average method.

71. The materials account of the Flynn Company reflected the following changes during May:

|                  |                  |
|------------------|------------------|
| Balance, May 1   | 500 units @ \$10 |
| Received, May 5  | 300 units @ \$12 |
| Issued, May 10   | 400 units        |
| Received, May 15 | 200 units @ \$15 |
| Issued, May 25   | 300 units        |

Assuming that Flynn Company maintains perpetual inventory records, calculate the ending inventory at May 31 and the cost of the units issued in May using each of the following methods:

- (a) First in, first out (FIFO)
- (b) Last in, first out (LIFO)
- (c) Moving average

72. The following accounts are maintained by the Sprague Manufacturing Company in its general ledger: Materials, Work in Process, Factory Overhead, and Accounts Payable. The materials account had a debit balance of \$40,000 on November 1. A summary of material transactions for November shows:
- (1) Materials purchased on account, \$62,000
  - (2) Direct materials issued, \$58,500
  - (3) Direct materials returned to storeroom, \$1,200
  - (4) Indirect materials issued, \$3,600
  - (5) Indirect materials returned to storeroom, \$550
  - (6) Materials on hand were \$200 less than the stores ledger balance
- a. Prepare journal entries to record the materials transactions.
  - b. Post the journal entries to T-accounts.
  - c. What is the balance of the materials account on November 30?

73. The following decisions and transactions were made for the Sanders Company in May:

May 1 The production manager informed the storeroom keeper that the forecasted usage of Component X is 3,000 units. There are 1,500 units on hand, each having a unit cost of \$20. The company maintains a minimum stock of 1,000 units. The storeroom keeper notifies the purchasing agent that the company will need 2,500 units of X to meet May's production needs and maintain a minimum inventory of 1,200 units.

May 3 The purchasing agent checks with a number of vendors and orders 2,500 units of Component X. Unfortunately, the price has gone up to \$25.

May 7 The shipment of Component X is received and inspected. The units are in good condition and the company received the number of units it ordered.

May 9 The invoice covering Component X is received from the vendor and approved for payment.

May 21 The May 9 invoice is paid in full.

May 31 During the month, 2,950 units of Component X are issued to production. The company uses FIFO costing and a job order cost system.

May 31 An inventory of the storeroom is taken at the end of the day and there are 1,040 units of Component X on hand.

(a) Prepare a table to answer the following questions:

(1) What forms, if any, were used?

(2) What entry, if any, was recorded?

(b) Calculate the balance in the Materials account at May 31.

74. The Outdoor Manufacturing Company produces sporting equipment. The company maintains a single raw materials inventory account for both direct and indirect materials. The following information came from the factory ledger accounts for December:

|                                           |           |
|-------------------------------------------|-----------|
| Raw Materials, December 1                 | \$ 45,500 |
| Work in Process, December 1               | 125,000   |
| Finished Goods, December 1                | 175,000   |
| Raw materials purchases (during December) | 623,000   |
| Direct labor                              | 435,000   |
| Repairs and maintenance                   | 37,200    |
| Indirect materials                        | 16,700    |
| Utilities                                 | 63,200    |
| Indirect labor                            | 38,200    |
| Supervisors' salaries                     | 18,300    |
| Raw Materials, December 31                | 43,600    |
| Work in Process, December 31              | 135,000   |
| Finished Goods, December 31               | 150,000   |

Compute the cost of direct materials used during the month of December.

75. Skeeter Company produces 100,000 insect repellent devices each day, and the average number of units in work in process is 150,000, with an average value of \$300,000. The average annual carrying cost percentage is 30%.
- Determine the throughput time.
  - Compute the annual carrying cost.
  - If the same daily output can be achieved while reducing the work in process by 40%, determine the new throughput time.
  - Compute the annual carrying cost given the information in requirement c.

76. Omari Assembly, Inc., which uses backflush costing, had the following transactions during the month of October:

- (a) Purchased raw materials on account, \$700,000.
- (b) Requisitioned raw materials to production, \$700,000.
- (c) Distributed direct labor costs, \$105,000.
- (d) Manufacturing overhead incurred, \$215,000. (Use Various Credits for the account in the credit part of the entry.)
- (e) Completed all goods.
- (f) Sold goods for \$1,500,000 on account.

Prepare journal entries to record the above transactions.

77. Gilday Furniture Inc. produces custom furniture. Wood chips are an inevitable by-product of the cutting process, and are considered scrap. Gilday is unable to use this scrap; however, the company has an agreement to sell the scrap at market prices to a local company that processes the wood chips to make industrial fillers.

Record the entries required for scrap under each of the following conditions:

- (a) The revenue received for scrap is to be treated as other income. The market value of wood chips is stable and is currently \$200 per ton. The company has seven tons on hand.
- (b) The revenue received for scrap is to be treated as a reduction in manufacturing cost, but cannot be identified with a specific job. A firm price is not determinable for the scrap until it is sold. It is eventually sold for cash of \$800.
- (c) The revenue received for scrap is to be treated as a reduction in manufacturing cost, and five tons of scrap are related to a special job where the company made numerous round tables. The market value of wood chips is stable and is currently \$200 per ton.

78. Moreland Corporation manufactures bells and whistles. In June, 6,000 bells were completed on Job Order No. BX46. On final inspection, 400 bells were rejected and transferred to the spoiled goods inventory to be sold at \$.50 each.

Costs recorded on Job Order No. BX46 follow:

|                  |         |
|------------------|---------|
| Direct materials | \$2,400 |
| Direct labor     | 2,100   |
| Factory overhead | 1,200   |

Prepare the journal entries to record the following:

- a. Charges for materials, labor, and factory overhead for Job Order No. BX46
- b. Cost of the spoiled work, the transfer of the cost of the good toys to Finished Goods, and the sale of the imperfect toys, if the loss on spoilage is charged to all jobs worked on during the period
- c. Cost of the spoiled work, the transfer of the cost of the good bells to Finished Goods, and the sale of the imperfect ones, if the loss on spoilage is to be charged to Job Order No. BX46 only. (Round the new unit cost to the nearest whole cent, and assume part b, above, has not occurred.)

79. Kami company manufactures engine components. During the previous month, the Company manufactured 12,000 units of Component XRB for Job 3524 and incurred the following unit costs:

|                  |         |
|------------------|---------|
| Direct materials | \$32.00 |
| Direct labor     | 9.00    |
| Factory overhead | 6.00    |

When the units were tested after production, 300 units did not meet specifications and needed further polishing work. The unit cost of correcting the defects was:

|                  |      |
|------------------|------|
| Direct labor     | 3.00 |
| Factory overhead | 2.00 |

- a. Prepare the journal entries to record the cost to correct the defective work under each of the following scenarios:

1. If the cost of correcting the defective work is spread over all jobs that go through the production cycle
2. If the defects resulted from the exacting specifications of Job 3524

- b. Under Scenario 2 above, calculate the cost per unit of Job 3524.

## CHAPTER 2: ACCOUNTING FOR MATERIALS **Key**

1. D
2. A
3. D
4. B
5. A
6. D
7. C
8. B
9. C
10. B
11. C
12. C
13. D
14. B
15. C
16. A
17. C
18. D
19. C
20. C
21. C
22. D
23. B
24. A
25. A
26. A
27. D
28. C
29. A
30. A

- 31. A
- 32. C
- 33. A
- 34. C
- 35. B
- 36. B
- 37. A
- 38. C
- 39. B
- 40. A
- 41. C
- 42. B
- 43. D
- 44. D
- 45. D
- 46. C
- 47. D
- 48. D
- 49. D
- 50. C
- 51. C
- 52. A
- 53. A
- 54. D
- 55. D
- 56. B
- 57. C
- 58. B
- 59. C
- 60. B
- 61. B
- 62. C
- 63. A
- 64. C

65.

$$\begin{aligned}
 (a) \quad \text{Order point} &= \text{Expected usage during lead time} + \text{Safety stock} \\
 &= (100 \text{ units} \times 5 \text{ days}) + 1,000 \\
 &= \underline{1,500 \text{ units}}
 \end{aligned}$$

(b)

$$EOQ = \sqrt{\frac{2 \times \text{Order costs} \times \text{Annual demand}}{\text{Annual carrying cost per unit}}}$$

$$EOQ = \sqrt{\frac{2 \times \$50 \times 25,000}{\$10.00}} = 500 \text{ units}$$

66.

$$\begin{aligned}
 (a) \quad \text{Order point} &= \text{Expected usage during lead time} + \text{Safety stock} \\
 &= (15 \text{ units} \times 10 \text{ days}) + 200 \\
 &= \underline{350 \text{ units}}
 \end{aligned}$$

(b)

$$EOQ = \sqrt{\frac{2 \times \text{Order costs} \times \text{Annual demand}}{\text{Annual carrying cost per unit}}}$$

$$EOQ = \sqrt{\frac{2 \times \$25 \times 3,200}{\$1.00}} = 400 \text{ units}$$

$$\begin{aligned}
 (c) \quad \text{Annual ordering cost} &= \text{Number of orders} \times \text{Cost per order} \\
 &= \frac{3,200 \text{ Annual usage}}{400 \text{ EOQ}} \times \$25 \\
 &= 8 \times \$25 = \$200
 \end{aligned}$$

$$\text{Annual carrying cost} = \text{Average inventory} \times \text{Carrying cost per unit}$$

$$\begin{aligned}
 \text{Average inventory} &= \left( \frac{1}{2} \times \text{EOQ} \right) + \text{Safety Stock} \\
 &= \left( \frac{1}{2} \times 400 \right) + 200 = 400
 \end{aligned}$$

$$\text{Annual carrying cost} = 400 \times \$1.00 = \$400$$

67.

Materials Control Form

|                       | <u>Preparer</u>                  | <u>Receiver</u>   | <u>Purpose</u>                                                                                |
|-----------------------|----------------------------------|-------------------|-----------------------------------------------------------------------------------------------|
| Purchase requisition  | Storeroom keeper                 | Purchasing agent  | Notify purchasing agent that additional materials are needed.                                 |
| Materials requisition | Production department supervisor | Storeroom keeper  | To issue materials to the factory department for production                                   |
| Receiving report      | Receiving clerk                  | Purchasing agent  | To compare the vendor invoice and purchase order to make sure materials ordered were received |
|                       |                                  | Storeroom clerk   | To ensure all materials are received in the storeroom                                         |
| Purchase order        | Purchasing agent                 | Vendor (supplier) | Describes materials wanted, stating price and fixing delivery details                         |
| Debit/Credit memo     | Purchasing agent                 | Vendor (supplier) | To notify vendor of discrepancies in shipments                                                |

68.

| Received    |                 |                   |               | Issued          |                   |               | Balance         |                   |               |
|-------------|-----------------|-------------------|---------------|-----------------|-------------------|---------------|-----------------|-------------------|---------------|
| <u>Date</u> | <u>Quantity</u> | <u>Unit Price</u> | <u>Amount</u> | <u>Quantity</u> | <u>Unit Price</u> | <u>Amount</u> | <u>Quantity</u> | <u>Unit Price</u> | <u>Amount</u> |
| 1/1         |                 |                   |               |                 |                   |               | 190             | 30                | 5,700         |
| 1/5         | 130             | 32                | 4,160         |                 |                   |               | 190             | 30                |               |
|             |                 |                   |               |                 |                   |               | 130             | 32                | 9,860         |
| 1/18        |                 |                   |               | 190             | 30                | 5,700         |                 |                   |               |
|             |                 |                   |               | 50              | 32                | 1,600         | 80              | 32                | 2,560         |
| 1/20        | 210             | 35                | 7,350         |                 |                   |               | 80              | 32                |               |
|             |                 |                   |               |                 |                   |               | 210             | 35                | 7,350         |
| 1/30        |                 |                   |               | 70              | 32                | 2,240         | 10              | 32                |               |
|             |                 |                   |               |                 |                   |               | 210             | 35                | 7,670         |
|             |                 |                   |               |                 |                   |               |                 |                   |               |
|             |                 |                   |               |                 |                   |               |                 |                   |               |

Ending Inventory:  
220 units having a total cost of 7,670 (10 units x \$32) + (210 units x \$210)

Cost of Units Issued:  
310 units having a total cost of \$9,540 (5,700 + 1,600 + 2,240)

69.

| Received |          |            |        | Issued   |            |        | Balance  |            |        |
|----------|----------|------------|--------|----------|------------|--------|----------|------------|--------|
| Date     | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount |
| 5/1      |          |            |        |          |            |        | 180      | 30         | 5,400  |
| 5/2      | 60       | 32         | 1,920  |          |            |        | 180      | 30         |        |
|          |          |            |        |          |            |        | 60       | 32         | 7,320  |
| 5/4      |          |            |        | 20       | 30         | 600    |          |            |        |
|          |          |            |        | 60       | 32         | 1,920  | 160      | 30         | 4,800  |
| 5/27     | 100      | 34         | 3,400  |          |            |        | 160      | 30         |        |
|          |          |            |        |          |            |        | 100      | 34         | 8,200  |
| 5/31     |          |            |        | 50       | 30         | 1,500  |          |            |        |
|          |          |            |        | 100      | 34         | 3,400  | 110      | 30         | 3,300  |

Ending Inventory:

110 units having a total cost of \$3,300 (110 x \$30)

Cost of Units Issued:

230 units having a total cost of \$7,420 (600 + 1,920 + 1,500 + 3,400)

70.

| Received |          |            |        | Issued   |            |        | Balance  |            |        |
|----------|----------|------------|--------|----------|------------|--------|----------|------------|--------|
| Date     | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount |
| 8/1      |          |            |        |          |            |        | 18       | 200.00     | 3,600  |
| 8/2      | 6        | 210.00     | 1,260  |          |            |        | 24       | 202.50     | 4,860  |
| 8/8      |          |            |        | 8        | 202.50     | 1,620  | 16       | 202.50     | 3,240  |
| 8/15     | 10       | 222.00     | 2,220  |          |            |        | 26       | 210.00     | 5,460  |
| 8/27     |          |            |        | 15       | 210.00     | 3,150  | 11       | 210.00     | 2,310  |

Ending Inventory:

11 units having a total cost of \$2,310

Cost of Units Issued:

23 units having a total cost of \$4,770 (1,620 + 3,150)

Unit cost calculations:

$4,860 / 24 = 202.50$

$5,460 / 26 = 210.00$

71. (a) FIFO:

| Received |          |            |        | Issued   |            |        | Balance  |            |        |
|----------|----------|------------|--------|----------|------------|--------|----------|------------|--------|
| Date     | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount |
| 5/1      |          |            |        |          |            |        | 500      | 10         | 5,000  |
| 5/5      | 300      | 12         | 3,600  |          |            |        | 500      | 10         |        |
|          |          |            |        |          |            |        | 300      | 12         | 8,600  |
| 5/10     |          |            |        | 400      | 10         | 4,000  | 100      | 10         |        |
|          |          |            |        |          |            |        | 300      | 12         | 4,600  |
| 5/15     | 200      | 15         | 3,000  |          |            |        | 100      | 10         |        |
|          |          |            |        |          |            |        | 300      | 12         |        |
|          |          |            |        |          |            |        | 200      | 15         | 7,600  |
| 5/25     |          |            |        | 100      | 10         | 1,000  |          |            |        |
|          |          |            |        | 200      | 12         | 2,400  | 100      | 12         |        |
|          |          |            |        |          |            |        | 200      | 15         | 4,200  |

Ending Inventory:

300 units having a total cost of \$4,200 (100 units x \$12) + (15 units x \$15)

Cost of Units Issued:

700 units having a total cost of \$7,400 (4,000 + 1,000 + 2,400)

(b) LIFO:

| Received |          |            |        | Issued   |            |        | Balance  |            |        |
|----------|----------|------------|--------|----------|------------|--------|----------|------------|--------|
| Date     | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount |
| 5/1      |          |            |        |          |            |        | 500      | 10         | 5,000  |
| 5/5      | 300      | 12         | 3,600  |          |            |        | 500      | 10         |        |
|          |          |            |        |          |            |        | 300      | 12         | 8,600  |
| 5/10     |          |            |        | 100      | 10         | 1,000  |          |            |        |
|          |          |            |        | 300      | 12         | 3,600  | 400      | 10         | 4,000  |
| 5/15     | 200      | 15         | 3,000  |          |            |        | 400      | 10         |        |
|          |          |            |        |          |            |        | 200      | 15         | 7,000  |
| 5/25     |          |            |        | 100      | 10         | 1,000  |          |            |        |
|          |          |            |        | 200      | 15         | 3,000  | 300      | 10         | 3,000  |

Ending Inventory:

300 units having a total cost of \$3,000 (300 x \$10)

Cost of Units Issued:

700 units having a total cost of \$8,600 (1,000 + 3,600 + 1,000 + 3,000)

(b) Moving Average:

| Received |          |            |        | Issued   |            |        | Balance  |            |        |
|----------|----------|------------|--------|----------|------------|--------|----------|------------|--------|
| Date     | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount | Quantity | Unit Price | Amount |
| 5/1      |          |            |        |          |            |        | 500      | 10         | 5,000  |
| 5/5      | 300      | 12         | 3,600  |          |            |        | 800      | 10.75      | 8,600  |
| 5/10     |          |            |        | 400      | 10.75      | 4,300  | 400      | 10.75      | 4,300  |
| 5/15     | 200      | 15         | 3,000  |          |            |        | 600      | 12.17      | 7,300  |
| 5/25     |          |            |        | 300      | 12.17      | 3,650  | 300      | 12.17      | 3,650  |

Ending Inventory:

300 units having a total cost of \$3,650

Cost of Units Issued:

700 units having a total cost of \$7,950 (4,300 + 3,650)

Unit cost calculations:

$8,600 / 800 = 10.75$

$7,300 / 600 = 12.16667$

|     |     |                               |        |        |
|-----|-----|-------------------------------|--------|--------|
| (a) | (1) | Materials<br>Accounts Payable | 62,000 | 62,000 |
|     | (2) | Work in Process<br>Materials  | 58,500 | 58,500 |
|     | (3) | Materials<br>Work in Process  | 1,200  | 1,200  |
|     | (4) | Factory Overhead<br>Materials | 3,600  | 3,600  |
|     | (5) | Materials<br>Factory Overhead | 550    | 550    |
|     | (6) | Factory Overhead<br>Materials | 200    | 200    |

|                                                                                                                         |                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <div style="border-bottom: 1px solid black; display: inline-block; padding-bottom: 2px;"> <b>Work in Process</b> </div> | <div style="border-bottom: 1px solid black; display: inline-block; padding-bottom: 2px;"> <b>Factory Overhead</b> </div> |
| (2) 58,500   (3) 1,200<br>(6) 200                                                                                       | (4) 3,600   (5) 550                                                                                                      |

7

73.

| <u>Date</u> | <u>Form</u>           | <u>Account</u>                    | <u>Debit</u> | <u>Credit</u> |
|-------------|-----------------------|-----------------------------------|--------------|---------------|
| May 1       | Purchase requisition  | No entry                          |              |               |
| May 3       | Purchase order        | No entry                          |              |               |
| May 7       | Receiving report      | No entry                          |              |               |
| May 9       | None                  | Materials<br>Accounts Payable     | 62,500       | 62,500        |
| May 21      | Approved voucher      | Accounts Payable *<br>Cash        | 62,500       | 62,500        |
| May 31      | Materials requisition | Work in Process **<br>Materials   | 66,250       | 66,250        |
| May 31      | Inventory report      | Factory Overhead ***<br>Materials | 250          | 250           |

\* 2,500 units x \$25 = \$62,500

\*\* FIFO Basis:

|                               |                             |                 |
|-------------------------------|-----------------------------|-----------------|
| Beginning Inventory           | 1,500 units @ \$20          | \$30,000        |
| Received                      | <u>2,500</u> units @ \$25   | <u>62,500</u>   |
| Total available               | 4,000 units                 | 92,500          |
| Issued (2,950 units)          | (1,500) units @ \$20        | (30,000)        |
|                               | <u>(1,450)</u> units @ \$25 | <u>(36,250)</u> |
| Per perpetual records @ 5/31  | 1,050 units @ \$25          | 26,250          |
| Per physical inventory @ 5/31 | <u>1,040</u> units          |                 |
| Inventory adjustment needed   | 10 units @ \$25             |                 |

\*\* (1,500 x \$20) + (1,450 x \$25) = \$66,250

\*\*\* 10 x \$25 = \$250

(b) Units in inventory at May 31 = 1,040 units @ \$25 = \$26,000 per above

74.

|                                            |                  |
|--------------------------------------------|------------------|
| Raw materials inventory, December 1        | \$ 45,500        |
| Raw materials purchases                    | <u>623,000</u>   |
| Total materials available                  | \$668,500        |
| Less: Raw materials inventory, December 31 | <u>43,600</u>    |
| Raw materials used                         | \$624,900        |
| Less: Indirect materials used              | <u>16,700</u>    |
| Direct materials used                      | <u>\$608,200</u> |

Instructor Note: This question relates concepts from chapter 2 to those learned in chapter 1.

75. a.  $150,000 / 100,000 = 1.5$  days

b.  $\$300,000 \times 30\% = \$90,000$

c.  $150,000 \times 40\% = 60,000$  unit reduction

$(150,000 - 60,000) / 100,000 = .9$  days

d.  $30\% \text{ carrying cost} \times ((1-.4) \times \$90,000) = \$16,200$

|     |                                                   |       |           |           |
|-----|---------------------------------------------------|-------|-----------|-----------|
| 76. |                                                   |       |           |           |
| (a) | Raw and In-Process<br>Accounts Payable            |       | 700,000   | 700,000   |
| (b) | No entry                                          |       |           |           |
| (c) | Conversion Costs<br>Payroll                       |       | 105,000   | 105,000   |
| (d) | Conversion Costs<br>Various Credits               |       | 215,000   | 215,000   |
| (e) | Finished Goods<br>Raw and In-Process              |       | 1,020,000 | 1,020,000 |
| (f) | Accounts Receivable<br>Sales                      |       | 1,500,000 | 1,500,000 |
|     | Cost of Goods Sold<br>Finished Goods              |       | 1,020,000 | 1,020,000 |
| 77. |                                                   |       |           |           |
| (a) | Scrap Materials<br>Scrap Revenue                  | 1,400 | 1,400     |           |
|     | Cash (or Accounts Receivable)<br>Scrap Materials  | 1,400 | 1,400     |           |
| (b) | Cash (or Accounts Receivable)<br>Factory Overhead | 800   | 800       |           |
| (c) | Scrap Materials<br>Work in Process                | 1,000 | 1,000     |           |
|     | Cash (or Accounts Receivable)<br>Scrap Materials  | 1,000 | 1,000     |           |

|          |                                                                  |                  |       |
|----------|------------------------------------------------------------------|------------------|-------|
| 78.      |                                                                  |                  |       |
| (a)      | Work in Process                                                  | 5,700            |       |
|          | Materials                                                        |                  | 2,400 |
|          | Payroll (direct labor)                                           |                  | 2,100 |
|          | Factory Overhead                                                 |                  | 1,200 |
| (b)      | Spoiled Goods (400 ´ \$.50)                                      | 200              |       |
|          | Factory Overhead                                                 | 180              |       |
|          | Work in Process (400 ´ \$.95*)                                   |                  | 380   |
|          | Finished Goods ((6,000 - 400) ´ \$.95)                           | 5,320            |       |
|          | Work in Process                                                  |                  | 5,320 |
|          | Cash                                                             | 200              |       |
|          | Spoiled Goods                                                    |                  | 200   |
| (c)      | Spoiled Goods                                                    | 200              |       |
|          | Work in Process                                                  |                  | 200   |
|          | Finished Goods (5,600 ´ \$.98*)                                  | 5,488            |       |
|          | Work in Process                                                  |                  | 5,488 |
|          | Cash                                                             | 200              |       |
|          | Spoiled Goods                                                    |                  | 200   |
|          | * Cost per unit \$5,700 / 6,000 = \$.95                          |                  |       |
|          | ** $\frac{\$5,700 - \$200}{5,600} = \underline{\$.9821}$ rounded |                  |       |
| 79. (a.) |                                                                  |                  |       |
| (1.)     | Factory Overhead (((\$3.00 + 2.00) x 300)                        | 1,500            |       |
|          | Payroll (direct labor) (\$3.00 x 300)                            |                  | 900   |
|          | Factory Overhead (\$2.00 x 300)                                  |                  | 600   |
| (2.)     | Work in Process (Job 3524)                                       | 1,500            |       |
|          | Payroll                                                          |                  | 900   |
|          | Factory Overhead                                                 |                  | 600   |
| (b.)     |                                                                  |                  |       |
|          | Number of units produced                                         | 12,000           |       |
|          | Original cost per unit (\$32.00 + 9.00 + 6.00)                   | \$ <u>47.00</u>  |       |
|          | Total original cost                                              | \$564,000        |       |
|          | Plus cost of correcting defective work                           | <u>1,500</u>     |       |
|          | Total cost of Job 3524                                           | <u>\$565,500</u> |       |
|          | Cost per unit of Job 3524 (\$565,500 / 12,000)                   | \$ 47.125        |       |