## CHAPTER 8

## VALUATION OF INVENTORIES: A COST BASIS APPROACH

## MULTIPLE CHOICE—Conceptual

| Answer | No. | Description |
| :---: | ---: | :--- |
| d | 1. | Entries under perpetual inventory system. |
| b | 2. | Classification of goods in transit. |
| a | 3. | Classification of goods in transit. |
| d | 4. | Identify inventory ownership. |
| d | 5. | Identify a product financing arrangement. |
| a | 6. | Identify ownership under product financing arrangement. |
| b | 7. | Classification of goods on consignment. |
| b | 8. | Effect of recording merchandise on consignment. |
| a | 9. | Effect of ending inventory overvaluation. |
| a | 10. | Effect of inventory errors on income. |
| d | 11. | Effect of understating purchases and ending inventory. |
| b | 12. | Identification of product costs. |
| d | 13. | Determine product costs. |
| b | 14. | Interest capitalization in manufacturing inventory. |
| a | 15. | Classification of factory overhead costs. |
| b | 16. | Classification of fixed overhead costs. |
| b | 17. | Absorption and variable costing. |
| d | 18. | Determine cost of purchased inventory, using net method. |
| a | 19. | Determine cost of purchased inventory, using gross method. |
| a | 20. | Recording inventory purchases at gross or net amounts. |
| c | 21. | Recording inventory purchases at gross or net amounts. |
| a | 22. | Nature of trade discounts. |
| a | 23. | Average cost inventory valuation. |
| b | 24. | Weighted-average inventory method. |
| a | 25. | Nature of FIFO valuation of inventory. |
| b | 26. | Flow of costs in a manufacturing situation. |
| a | 27. | FIFO and decreasing prices. |
| b | 28. | FIFO and increasing prices. |
| a | 29. | FIFO and increasing prices. |
| b | 30. | FIFO and LIFO inventory assumptions. |
| c | 31. | LIFO and increasing prices. |
| d | 32. | Knowledge of inventory valuation methods. |
| d | 33. | Periodic and perpetual inventory methods. |
| d | 34. | LIFO reserve account classification. |
| d | 35. | LIFO for tax purposes and external reporting. |
| c | 36. | LIFO advantages. |
| d | 37. | Effect of inventory and depreciation errors on income. |
|  |  |  |

MULTIPLE CHOICE-Computational

| Answer | No. | Description <br> a <br> a |
| :---: | :--- | :--- |
| 38. | Effect of inventory and depreciation errors on retained earnings. |  |
| d | 40. | Effect of inventory errors on working capital. |
| d | 41. | Accolate cost of goods available for sale. |
| d | 42. | Adjust Accounts purchase return (net method). |
| b | 43. | Calculate ending inventory using the net method. |
| d | 44. | Calculate ending inventory using moving average. |
| b | 45. | Calculate ending inventory using LIFO. |
| d | 46. | Calculate cost of goods sold using FIFO. |
| a | 47. | Effect of using LIFO or FIFO. |
| a | 48. | Perpetual inventory—LIFO valuation. |
| c | 49. | Perpetual inventory—LIFO valuation. |
| c | 50. | Perpetual inventory-FIFO valuation. |
| b | 51. | Perpetual inventory-average cost valuation. |
| c | 52. | Calculate ending inventory using dollar-value LIFO. |
| c | 53. | Calculate ending inventory using dollar-value LIFO. |
| a | 54. | Calculate ending inventory using dollar-value LIFO. |
| b | 55. | Calculate price index using double extension method. |

## MULTIPLE CHOICE—CPA Adapted

| Answer | No. | Description |
| :---: | :--- | :--- |
| a | 56. | Identification of inventory costs. |
| c | 57. | Determine cost of purchased inventory. |
| b | 58. | Determine cost of purchased inventory. |
| c | 59. | Determine cost of purchased inventory. |
| d | 60. | Determine cost of sales. |
| b | 61. | Calculate Accounts Payable at year end. |
| d | 62. | Calculate Accounts Payable at year end. |
| a | 63. | Calculate Accounts Payable at year end. |
| c | 64. | Calculate unit cost using moving-average method. |
| a | 65. | Periodic and perpetual inventory methods. |
| c | 66. | FIFO and LIFO with increasing prices. |
| c | 67. | Calculate ending inventory using LIFO. |
| a | 68. | Dollar-value LIFO and the double extension approach. |
| b | 69. | Calculate ending inventory using dollar-value LIFO. |

## EXERCISES

## Item Description

E8-70 Recording purchases at net amounts.
E8-71 Recording purchases at net amounts.
E8-72 Comparison of FIFO and LIFO.
E8-73 FIFO and LIFO inventory methods.
E8-74 FIFO and LIFO inventory methods.

## Exercises (cont.)

Item Description

| E8-75 | Perpetual LIFO. |
| :--- | :--- |
| E8-76 | Perpetual LIFO and periodic FIFO. |
| E8-77 | Dollar-value LIFO. |
| E8-78 | Analysis of gross profit. |

## PROBLEMS

## Item Description

P8-79 Accounting for purchase discounts.
P8-80 Analysis of errors.
P8-81 Inventory cut-off.
P8-82 Inventory methods.
P8-83 Dollar-value LIFO.
P8-84 Dollar-value LIFO.

## CHAPTER LEARNING OBJECTIVES

1. Identify major classifications of inventory.
2. Distinguish between perpetual and periodic inventory systems.
3. Identify the effects of inventory errors on the financial statements.
4. Identify the items that should be included as inventory cost.
5. Describe and compare the flow assumptions used in accounting for inventories.
6. Explain the significance and use of a LIFO reserve.
7. Explain the effect of LIFO liquidations.
8. Explain the dollar-value LIFO method.
9. Identify the major advantages and disadvantages of LIFO.
10. Identify the reasons why a given inventory method is selected.

## SUMMARY OF LEARNING OBJECTIVES BY QUESTIONS

| L.O. 2 |  | L.O. 3 |  |
| :---: | :---: | :---: | :---: |
| (cont.) | - No. | Type | No. |
| 1. | MC | 8. | MC |
| 2 | MC | 9. | MC |
| 3. | MC | 10. | MC |
| 4. | MC | 11. | MC |
| 5. | MC | 37. | MC |
| 6. | MC | 38. | MC |
| 7. | MC | 39. | MC |
| 56. | MC | 80. | P |
| 57. | MC |  |  |
| 60. | MC |  |  |
| 61. | MC |  |  |
| 62. | MC |  |  |
| 63. | MC |  |  |
| 81. | P |  |  |


| L.O. 4 |  |
| :---: | :---: |
| Type | No. |
| 12. | MC |
| 13. | MC |
| 14. | MC |
| 15. | MC |
| 16. | MC |
| 17. | MC |
| 18. | MC |
| 19. | MC |
| 20. | MC |
| 21. | MC |
| 22. | MC |
| 40. | MC |
| 41. | MC |
| 42. | MC |
| 58. | MC |
| 59. | MC |
| 61. | MC |
| 70. | E |
| 71. | E |
| 79. | P |

$\frac{\text { L.O. } 5}{\text { Type } \quad \text { No. }}$
L.O. 5
Type No. Typ
23. MC 47. MC
24. MC
48. MC
49. MC
50. MC
51. MC
64. MC
65. MC
66. MC
67. MC
72. E
73. E
74. E
75. E
44. MC
76. E
45. MC
82. P

| L.O. 6 | L.O. 7 |  | L.O. 8 |  | L.O. 9 |  | L.O. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 |  |  |  |  |  |  |  |  |
| No.Type No. | Type | No. | Type | No. | Type | No. | Type |  |
| 34. MC | 78. | E | 52. | MC | 35. | MC | 72. | E |
|  |  |  | 53. | MC | 36. | MC |  |  |
|  |  |  | 54. | MC |  |  |  |  |
|  |  |  | 55. | MC |  |  |  |  |
|  |  |  | 68. | MC |  |  |  |  |
|  |  |  | 69. | MC |  |  |  |  |
|  |  |  | 77. | E |  |  |  |  |
|  |  |  | 83. | P |  |  |  |  |
|  |  |  | 84. | P |  |  |  |  |

Choice
Note: $\quad$ MC $=$ Multiple
$\mathrm{E}=$ Exercise
$\mathrm{P}=$ Problem

## MULTIPLE CHOICE-Conceptual

1. When using a perpetual inventory system,
a. no Purchases account is used.
b. a Cost of Goods Sold account is used.
c. two entries are required to record a sale.
d. all of these.
2. Goods in transit which are shipped f.o.b. shipping point should be
a. included in the inventory of the seller.
b. included in the inventory of the buyer.
c. included in the inventory of the shipping company.
d. none of these.
3. Goods in transit which are shipped f.o.b. destination should be
a. included in the inventory of the seller.
b. included in the inventory of the buyer.
c. included in the inventory of the shipping company.
d. none of these.
4. Which of the following items should be included in a company's inventory at the balance sheet date?
a. Goods in transit which were purchased f.o.b. destination.
b. Goods received from another company for sale on consignment.
c. Goods sold to a customer which are being held for the customer to call for at his or her convenience.
d. None of these.

Use the following information for questions 5 and 6.
During 2001 Elway Corporation transferred inventory to Howell Corporation and agreed to repurchase the merchandise early in 2002. Howell then used the inventory as collateral to borrow from Norwalk Bank, remitting the proceeds to Elway. In 2002 when Elway repurchased the inventory, Howell used the proceeds to repay its bank loan.
5. This transaction is known as $\mathrm{a}(\mathrm{n})$
a. consignment.
b. installment sale.
c. assignment for the benefit of creditors.
d. product financing arrangement.
6. On whose books should the cost of the inventory appear at the December 31, 2001 balance sheet date?
a. Elway Corporation
b. Howell Corporation
c. Norwalk Bank
d. Howell Corporation, with Elway making appropriate note disclosure of the transaction
7. Goods on consignment are
a. included in the consignee's inventory.
b. recorded in a Consignment Out account which is an inventory account.
c. recorded in a Consignment In account which is an inventory account.
d. all of these
8. Dane Co. received merchandise on consignment. As of March 31, Dane had recorded the transaction as a purchase and included the goods in inventory. The effect of this on its financial statements for March 31 would be
a. no effect.
b. net income was correct and current assets and current liabilities were overstated.
c. net income, current assets, and current liabilities were overstated.
d. net income and current liabilities were overstated.
9. Eller Co. received merchandise on consignment. As of January 31, Eller included the goods in inventory, but did not record the transaction. The effect of this on its financial statements for January 31 would be
a. net income, current assets, and retained earnings were overstated.
b. net income was correct and current assets were understated.
c. net income and current assets were overstated and current liabilities were understated.
d. net income, current assets, and retained earnings were understated.
10. Cross Co. accepted delivery of merchandise which it purchased on account. As of December 31, Cross had recorded the transaction, but did not include the merchandise in its inventory. The effect of this on its financial statements for December 31 would be
a. net income, current assets, and retained earnings were understated.
b. net income was correct and current assets were understated.
c. net income was understated and current liabilities were overstated.
d. net income was overstated and current assets were understated.
11. On June 15, 2001, Stilley Corporation accepted delivery of merchandise which it purchased on account. As of June 30, Stilley had not recorded the transaction or included the merchandise in its inventory. The effect of this on its balance sheet for June 30, 2001 would be
a. assets and stockholders' equity were overstated but liabilities were not affected.
b. stockholders' equity was the only item affected by the omission.
c. assets, liabilities, and stockholders' equity were understated.
d. none of these.
12. Which of the following is correct?
a. Selling costs are product costs.
b. Manufacturing overhead costs are product costs.
c. Interest costs for routine inventories are product costs.
d. All of these.
13. All of the following costs should be charged against revenue in the period in which costs are incurred except for
a. manufacturing overhead costs for a product manufactured and sold in the same accounting period.
b. costs which will not benefit any future period.
c. costs from idle manufacturing capacity resulting from an unexpected plant shutdown.
d. costs of normal shrinkage and scrap incurred for the manufacture of a product in ending inventory.
14. Which of the following types of interest cost incurred in connection with the purchase or manufacture of inventory should be capitalized as a product cost?
a. Purchase discounts lost
b. Interest incurred during the production of discrete projects such as ships or real estate projects
c. Interest incurred on notes payable to vendors for routine purchases made on a repetitive basis
d. All of these should be capitalized.
15. An exception to the general rule that costs should be charged to expense in the period incurred is
a. factory overhead costs incurred on a product manufactured but not sold during the current accounting period.
b. interest costs for financing of inventories that are routinely manufactured in large quantities on a repetitive basis.
c. general and administrative fixed costs incurred in connection with the purchase of inventory.
d. sales commission and salary costs incurred in connection with the sale of inventory.
16. Under variable costing, fixed manufacturing overhead costs are
a. product costs.
b. period costs.
c. charged to work in process and finished goods.
d. part of cost of goods sold.
17. Other things being equal, income computed by the variable costing method will exceed that computed by the absorption method if
a. units produced exceed units sold.
b. units sold exceed units produced.
c. fixed manufacturing costs increase.
d. variable manufacturing costs increase.
18. The use of a Discounts Lost account implies that the recorded cost of a purchased inventory item is its
a. invoice price.
b. invoice price plus the purchase discount lost.
c. invoice price less the purchase discount taken.
d. invoice price less the purchase discount allowable whether taken or not.
19. The use of a Purchase Discounts account implies that the recorded cost of a purchased inventory item is its
a. invoice price.
b. invoice price plus any purchase discount lost.
c. invoice price less the purchase discount taken.
d. invoice price less the purchase discount allowable whether taken or not.

Use the following information for questions 20 and 21.
During 2001, which was the first year of operations, Luther Company had merchandise purchases of $\$ 985,000$ before cash discounts. All purchases were made on terms of $2 / 10, \mathrm{n} / 30$. Three-fourths of the items purchased were paid for within 10 days of purchase. All of the goods available had been sold at year end.
20. Which of the following recording procedures would result in the highest cost of goods sold for 2001?

1. Recording purchases at gross amounts
2. Recording purchases at net amounts, with the amount of discounts not taken shown under "other expenses" in the income statement
a. 1
b. 2
c. Either 1 or 2 will result in the same cost of goods sold.
d. Cannot be determined from the information provided.
3. Which of the following recording procedures would result in the highest net income for 2001?
4. Recording purchases at gross amounts
5. Recording purchases at net amounts, with the amount of discounts not taken shown under "other expenses" in the income statement
a. 1
b. 2
c. Either 1 or 2 will result in the same net income.
d. Cannot be determined from the information provided.
6. When using the periodic inventory system, which of the following generally would not be separately accounted for in the computation of cost of goods sold?
a. Trade discounts applicable to purchases during the period
b. Cash (purchase) discounts taken during the period
c. Purchase returns and allowances of merchandise during the period
d. Cost of transportation-in for merchandise purchased during the period
7. In situations where there is a rapid turnover, an inventory method which produces a balance sheet valuation similar to the first-in, first-out method is
a. average cost.
b. base stock.
c. joint cost.
d. prime cost.
8. The pricing of issues from inventory must be deferred until the end of the accounting period under the following method of inventory valuation:
a. moving average.
b. weighted-average.
c. LIFO perpetual.
d. FIFO.
9. An inventory pricing procedure in which the oldest costs incurred rarely have an effect on the ending inventory valuation is
a. FIFO.
b. LIFO.
c. base stock.
d. weighted-average.
10. Which method of inventory pricing best approximates specific identification of the actual flow of costs and units in most manufacturing situations?
a. Average cost
b. First-in, first-out
c. Last-in, first-out
d. Base stock
11. Assuming no beginning inventory, what can be said about the trend of inventory prices if cost of goods sold computed when inventory is valued using the FIFO method exceeds cost of goods sold when inventory is valued using the LIFO method?
a. Prices decreased.
b. Prices remained unchanged.
c. Prices increased.
d. Price trend cannot be determined from information given.
12. In a period of rising prices, the inventory method which tends to give the highest reported net income is
a. base stock.
b. first-in, first-out.
c. last-in, first-out.
d. weighted-average.
13. In a period of rising prices, the inventory method which tends to give the highest reported inventory is
a. FIFO.
b. moving average.
c. LIFO.
d. weighted-average.
14. Quayle Corporation's inventory cost on its balance sheet was lower using first-in, first-out than it would have been using last-in, first-out. Assuming no beginning inventory, in what direction did the cost of purchases move during the period?
a. Up
b. Down
c. Steady
d. Cannot be determined
15. In a period of rising prices, the inventory method which tends to give the highest reported cost of goods sold is
a. FIFO.
b. average cost.
c. LIFO.
d. none of these.
16. Which of the following statements is not valid as it applies to inventory costing methods?
a. If inventory quantities are to be maintained, part of the earnings must be invested (plowed back) in inventories when FIFO is used during a period of rising prices.
b. LIFO tends to smooth out the net income pattern by matching current cost of goods sold with current revenue, when inventories remain at constant quantities.
c. When a firm using the LIFO method fails to maintain its usual inventory position (reduces stock on hand below customary levels), there may be a matching of old costs with current revenue.
d. The use of FIFO permits some control by management over the amount of net income for a period through controlled purchases, which is not true with LIFO.
17. The acquisition cost of a certain raw material changes frequently. The book value of the inventory of this material at year end will be the same if perpetual records are kept as it would be under a periodic inventory method only if the book value is computed under the
a. weighted-average method.
b. moving average method.
c. LIFO method.
d. FIFO method.
18. When a company uses LIFO for external reporting purposes and FIFO for internal reporting purposes, an Allowance to Reduce Inventory to LIFO account is used. This account should be reported
a. on the income statement in the Other Revenues and Gains section.
b. on the income statement in the Cost of Goods Sold section.
c. on the income statement in the Other Expenses and Losses section.
d. on the balance sheet in the Current Asset section.
19. Which of the following is true regarding the use of LIFO for inventory valuation?
a. If LIFO is used for external financial reporting, then it must also be used for internal reports.
b. For purposes of external financial reporting, LIFO may not be used with the lower of cost or market approach.
c. If LIFO is used for external financial reporting, then it cannot be used for tax purposes.
d. None of these.
20. If inventory levels are stable or increasing, an argument which is not an advantage of the LIFO method as compared to FIFO is
a. income taxes tend to be reduced in periods of rising prices.
b. cost of goods sold tends to be stated at approximately current cost on the income statement.
c. cost assignments typically parallel the physical flow of goods.
d. income tends to be smoothed as prices change over time.

## Multiple Choice Answers-Conceptual

| 1. | d | 7. | b | 13. | d | 19. | a | 25. | a | 31. | c |
| :--- | :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2. | b | 8. | b | 14. | b | 20. | a | 26. | b | 32. | d |
| 3. | a | 9. | a | 15. | a | 21. | c | 27. | a | 33. | d |
| 4. | d | 10. | a | 16. | b | 22. | a | 28. | b | 34. | d |
| 5. | d | 11. | d | 17. | b | 23. | a | 29. | a | 35. | d |
| 6. | a | 12. | b | 18. | d | 24. | b | 30. | b | 36. | c |

Solutions to those Multiple Choice questions for which the answer is "none of these."
4. Goods in transit which were purchased f.o.b. shipping point.
11. Assets and liabilities were understated but stockholders' equity was not affected.
35. If LIFO is used for tax purposes, then it must also be used for external financial reporting.

## MULTIPLE CHOICE-Computational

Use the following information for questions 37 through 39.
Dexter, Inc. is a calendar-year corporation. Its financial statements for the years 2002 and 2001 contained errors as follows:

|  | $\frac{2002}{}$ | $\frac{2001}{\text { Ending inventory }}$ |
| :--- | :--- | :--- |
|  | $\$ 4,000$ overstated | $\$ 7,000$ overstated |
| Depreciation expense | $\$ 2,000$ understated |  |
| $\$ 8,000$ overstated |  |  |

37. Assume that the proper correcting entries were made at December 31, 2001. By how much will 2002 income before taxes be overstated or understated?
a. \$2,000 understated
b. $\$ 2,000$ overstated
c. $\$ 4,000$ overstated
d. $\$ 6,000$ overstated
38. Assume that no correcting entries were made at December 31, 2001. Ignoring income taxes, by how much will retained earnings at December 31, 2002 be overstated or understated?
a. \$2,000 understated
b. \$6,000 overstated
c. $\$ 6,000$ understated
d. \$9,000 understated
39. Assume that no correcting entries were made at December 31, 2001, or December 31, 2002 and that no additional errors occurred in 2003. Ignoring income taxes, by how much will working capital at December 31, 2003 be overstated or understated?
a. $\quad \$ 0$
b. \$4,000 overstated
c. $\$ 4,000$ understated
d. \$3,000 understated
40. The following information is available for Kerr Company for 2001:

| Freight-in | $\$ 30,000$ |
| :--- | ---: |
| Purchase returns | 75,000 |
| Selling expenses | 150,000 |
| Ending inventory | 260,000 |

The cost of goods sold is equal to $300 \%$ of selling expenses. What is the cost of goods available for sale?
a. $\$ 450,000$.
b. $\$ 740,000$.
c. $\$ 665,000$.
d. $\$ 710,000$.

Use the following information for questions 41 and 42.
Pye Co. records purchases at net amounts. On May 5 Pye purchased merchandise on account, $\$ 8,000$, terms $2 / 10, n / 30$. Pye returned $\$ 500$ of the May 5 purchase and received credit on account. At May 31 the balance had not been paid.
41. The amount to be recorded as a purchase return is
a. $\$ 450$.
b. $\$ 510$.
c. $\$ 500$.
d. $\$ 490$.
42. By how much should the account payable be adjusted on May 31?
a. $\$ 0$.
b. $\$ 170$.
c. $\$ 160$.
d. $\$ 150$.

Use the following information for questions 43 and 44.
The following information was available from the inventory records of Lear Company for January:

Balance at January 1
Units
3,000
Purchases:
$\begin{array}{llll}\text { January } 6 & 2,000 & 10.30 & 20,600\end{array}$
January 26
Sales:
January 7
$(2,500)$
January 31
Balance at January 31
$(4,200)$ $\underline{\underline{1,000}}$

Unit Cost Total Cost
\$9.77 \$29,310
10.71

28,917
43. Assuming that Lear does not maintain perpetual inventory records, what should be the inventory at January 31, using the weighted-average inventory method, rounded to the nearest dollar?
a. $\$ 10,505$.
b. $\$ 10,237$.
c. $\$ 10,260$.
d. $\$ 10,360$.
44. Assuming that Lear maintains perpetual inventory records, what should be the inventory at January 31, using the moving-average inventory method, rounded to the nearest dollar?
a. $\$ 10,505$.
b. $\$ 10,237$.
c. $\$ 10,260$.
d. $\$ 10,360$.

Use the following information for questions 45 and 46.
Iron Co. has the following data related to an item of inventory:

| Inventory, March 1 | 100 units @ \$4.20 |
| :--- | :---: |
| Purchase, March 7 | 350 units @ $\$ 4.40$ |
| Purchase, March 16 | 70 units @ $\$ 4.50$ |
| Inventory, March 31 | 150 units |

45. The value assigned to ending inventory if Iron uses LIFO is
a. $\quad \$ 667$.
b. $\$ 640$.
c. $\$ 630$.
d. $\$ 675$.
46. The value assigned to cost of goods sold if Iron uses FIFO is
a. $\$ 667$.
b. $\$ 640$.
c. $\$ 1,635$.
d. $\$ 1,608$.
47. Carney Company has been using the LIFO method of inventory valuation for 10 years, since it began operations. Its 2001 ending inventory was $\$ 30,000$, but it would have been $\$ 60,000$ if FIFO had been used. Thus, if FIFO had been used, Carney's income before income taxes would have been
a. $\$ 30,000$ greater over the 10 -year period.
b. $\$ 30,000$ less over the 10 -year period.
c. $\$ 30,000$ greater in 2001.
d. $\$ 30,000$ less in 2001.

Use the following information for questions 48 through 51.
Transactions for the month of June were:

| Purchases |  |  | Sales |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1 | (balance) | 400 @ \$3.20 | June | 2 | 300 @ | \$5.50 |
| 3 |  | 1,100@ 3.10 |  | 6 | 800 @ | 5.50 |
| 7 |  | 600 @ 3.30 |  | 9 | 500 @ | 5.50 |
| 15 |  | 900 @ 3.40 |  | 10 | 200 @ | 6.00 |
| 22 |  | 250 @ 3.50 |  | 18 | 700 @ | 6.00 |
|  |  |  |  | 25 | 150 @ | 6.00 |

48. Assuming that perpetual inventory records are kept in units only, the ending inventory on a LIFO basis is
a. $\$ 1,900$.
b. $\$ 1,920$.
c. $\$ 1,970$.
d. $\$ 2,065$.
49. Assuming that perpetual inventory records are kept in dollars, the ending inventory on a LIFO basis is
a. $\$ 1,900$.
b. $\$ 1,920$.
c. $\$ 1,970$.
d. $\$ 2,065$.
50. Assuming that perpetual inventory records are kept in dollars, the ending inventory on a FIFO basis is
a. $\quad \$ 1,900$.
b. $\$ 1,920$.
c. $\$ 2,065$.
d. $\$ 2,100$.
51. Assuming that perpetual inventory records are kept in units only, the ending inventory on an average-cost basis, rounded to the nearest dollar, is
a. $\$ 1,980$.
b. $\$ 1,956$.
c. $\$ 1,970$.
d. $\$ 1,995$.

Use the following information for questions 52 through 54.
Dolan Corporation adopted the dollar-value LIFO method of inventory valuation on December 31, 1999. Its inventory at that date was $\$ 210,000$ and the relevant price index was 100. Information regarding inventory for subsequent years is as follows:

| Date | Inventory at <br> Current Prices | Current <br> Price Index |  |
| :--- | ---: | ---: | ---: |
| December 31, 2000 |  | $\$ 267,500$ | 107 |
| December 31, 2001 | 290,000 | 125 |  |
| December 31, 2002 | 338,000 | 130 |  |

52. What is the cost of the ending inventory at December 31, 2000 under dollar-value LIFO?
a. $\$ 250,000$.
b. $\$ 267,500$.
c. $\$ 252,800$.
d. $\$ 224,700$.
53. What is the cost of the ending inventory at December 31, 2001 under dollar-value LIFO?
a. $\$ 232,000$.
b. $\$ 237,500$.
c. $\$ 233,540$.
d. $\$ 250,000$.
54. What is the cost of the ending inventory at December 31, 2002 under dollar-value LIFO?
a. $\$ 269,940$.
b. $\$ 273,600$.
c. $\$ 260,000$.
d. $\$ 275,000$.
55. Unruh Company adopted the dollar-value LIFO method on January 1, 2001, at which time its inventory consisted of 6,000 units of Item A @ \$5.00 each and 3,000 units of Item B @ \$16.00 each. The inventory at December 31, 2001 consisted of 12,000 units of Item A and 7,000 units of Item B. The most recent actual purchases related to these items were as follows:

| Quantity |  |
| :---: | :---: |
| Purchased | Cost Per Unit |
| 2,000 | \$ 6.00 |
| 10,000 | 5.75 |
| 10,000 | 17.00 |

Using the double-extension method, what is the price index for 2001 that should be computed by Unruh Company?
a. $108.33 \%$
b. $109.59 \%$
c. $111.05 \%$
d. 220.51\%

## Multiple Choice Answers-Computational

| 37. | d | 40. | d | 43. | b | 46. | d | 49. | c | 52. | c | 55. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 38. | a | 41. | d | 44. | d | 47. | a | 50. | c | 53. | c |  |
| 39. | a | 42. | d | 45. | b | 48. | a | 51. | b | 54. | a |  |

## MULTIPLE CHOICE—CPA Adapted

56. How should the following costs affect a retailer's inventory valuation?

|  | Freight-in | Interest on Inventory Loan |
| :--- | :---: | :---: |
|  | Increase | No effect |
| b. | Increase | Increase |
| c. | No effect | Increase |
| d. | No effect | No effect |

57. The following information applied to Greer, Inc. for 2001:

| Merchandise purchased for resale | $\$ 200,000$ |
| :--- | ---: |
| Freight-in | 8,000 |
| Freight-out | 5,000 |
| Purchase returns | 2,000 |

Greer's 2001 inventoriable cost was
a. $\$ 200,000$.
b. $\$ 203,000$.
c. $\$ 206,000$.
d. $\$ 211,000$.
58. Utley Retailers purchased merchandise with a list price of $\$ 30,000$, subject to trade discounts of $20 \%$ and $10 \%$, with no cash discounts allowable. Utley should record the cost of this merchandise as
a. $\$ 21,000$.
b. $\$ 21,600$.
c. $\$ 23,400$.
d. $\$ 30,000$.
59. On June 1, 2001, Oslo Corp. sold merchandise with a list price of $\$ 15,000$ to Mead on account. Oslo allowed trade discounts of $30 \%$ and $20 \%$. Credit terms were $2 / 15, \mathrm{n} / 40$ and the sale was made f.o.b. shipping point. Oslo prepaid $\$ 300$ of delivery costs for Mead as an accommodation. On June 12, 2001, Oslo received from Mead a remittance in full payment amounting to
a. $\$ 8,232$.
b. $\$ 8,526$.
c. $\$ 8,532$.
d. $\$ 8,397$.
60. The following information was derived from the 2001 accounting records of Law Co.:

|  | Law's Central Warehouse | Law's Goods |  |
| :--- | :---: | :---: | :---: |
|  | $\$ 130,000$ |  | Held by Consignees |
| Beginning inventory | 475,000 | 70,000 |  |
| Purchases | 10,000 |  |  |
| Freight-in |  | 5,000 |  |
| Transportation to consignees | 30,000 | 8,000 |  |
| Freight-out | 145,000 | 20,000 |  |

Law's 2001 cost of sales was
a. $\$ 470,000$.
b. $\$ 500,000$.
c. $\$ 534,000$.
d. $\$ 539,000$.
61. Crane Corp.'s accounts payable at December 31, 2001, totaled $\$ 900,000$ before any necessary year-end adjustments relating to the following transactions:

- On December 27, 2001, Crane wrote and recorded checks to creditors totaling \$350,000 causing an overdraft of $\$ 100,000$ in Crane's bank account at December 31, 2001. The checks were mailed out on January 10, 2002.
- On December 28, 2001, Crane purchased and received goods for $\$ 200,000$, terms $2 / 10$, n/30. Crane records purchases and accounts payable at net amounts. The invoice was recorded and paid January 3, 2002.
- Goods shipped f.o.b. destination on December 20, 2001 from a vendor to Crane were received January 2 2002. The invoice cost was $\$ 65,000$.

At December 31, 2001, what amount should Crane report as total accounts payable?
a. $\$ 1,511,000$.
b. $\$ 1,446,000$.
c. $\$ 1,150,000$.
d. $\$ 1,100,000$.
62. The balance in Judd Co.'s accounts payable account at December 31, 2001 was \$600,000 before any necessary year-end adjustments relating to the following:

- Goods were in transit to Judd from a vendor on December 31, 2001. The invoice cost was $\$ 50,000$. The goods were shipped f.o.b. shipping point on December 29, 2001 and were received on January 4, 2002.
- Goods shipped f.o.b. destination on December 21, 2001 from a vendor to Judd was received on January 6, 2002. The invoice cost was $\$ 25,000$.
- On December 27, 2001, Judd wrote and recorded checks to creditors totaling \$30,000 that were mailed on January 10, 2002.

In Judd's December 31, 2001 balance sheet, the accounts payable should be
a. $\$ 630,000$
b. $\$ 650,000$.
c. $\$ 675,000$.
d. $\$ 680,000$.
63. Howe Co.'s accounts payable balance at December 31, 2001 was $\$ 1,200,000$ before considering the following transactions:

- Goods were in transit from a vendor to Howe on December 31, 2001. The invoice price was $\$ 80,000$, and the goods were shipped f.o.b. shipping point on December 29, 2001. The goods were received on January 4, 2002.
- Goods shipped to Howe, f.o.b. shipping point on December 20, 2001, from a vendor were lost in transit. The invoice price was $\$ 50,000$. On January 5, 2002, Howe filed a $\$ 50,000$ claim against the common carrier.

In its December 31, 2001 balance sheet, Howe should report accounts payable of
a. $\$ 1,330,000$.
b. $\$ 1,280,000$.
c. $\$ 1,250,000$.
d. $\$ 1,200,000$.
64. Dark Co. recorded the following data pertaining to raw material X during January 2001:

|  |  | Units |  |  |  |
| :--- | :--- | :--- | :---: | :--- | :---: |
| Date | Received | $\underline{\text { Cost }}$ | Issued | On Hand |  |
| $1 / 1 / 01$ | Inventory |  | $\$ 4.00$ |  | 3,200 |
| $1 / 11 / 01$ | Issue |  |  | 1,600 | 1,600 |
| $1 / 22 / 01$ | Purchase | 4,000 | $\$ 4.70$ |  | 5,600 |

The moving-average unit cost of X inventory at January 31, 2001 is
a. $\$ 4.35$.
b. $\$ 4.43$.
c. $\$ 4.50$.
d. $\$ 4.70$.
65. During periods of rising prices, a perpetual inventory system would result in the same dollar amount of ending inventory as a periodic inventory system under which of the following inventory cost flow methods?

|  | $\frac{\text { FIFO }}{}$ | LIFO |
| :--- | :--- | :--- |
| a. | Yes | No |
| b. | Yes | Yes |
| c. | No | Yes |
| d. | No | No |

66. Finn Co. was formed on January 2, 2001, to sell a single product. Over a two-year period, Finn's acquisition costs have increased steadily. Physical quantities held in inventory were equal to three months' sales at December 31, 2001, and zero at December 31, 2002. Assuming the periodic inventory system, the inventory cost method which reports the highest amount of each of the following is

|  | Inventory <br> December 31, 2001 | Cost of Sales <br> 200 |
| :--- | :---: | :---: |
|  | LIFO | FIFO |
| a. | LIFO | LIFO |
| b. | FIFO | FIFO |
| c. | FIFO | LIFO |

67. Noll Co. had 150 units of product A on hand at January 1, 2001, costing \$42 each. Purchases of product A during January were as follows:

| $\frac{\text { Date }}{}$ | $\frac{\text { Units }}{200}$ | $\underline{\text { Unit Cost }}$ |
| ---: | :---: | :---: |
| Jan. 10 | 250 | $\$ 44$ |
| 18 | 100 | 46 |
| 28 |  | 48 |

A physical count on January 31, 2001 shows 200 units of product A on hand. The cost of the inventory at January 31, 2001 under the LIFO method is
a. $\$ 9,400$.
b. $\$ 8,900$.
c. $\$ 8,500$.
d. $\$ 8,200$.
68. When the double extension approach to the dollar-value LIFO inventory cost flow method is used, the inventory layer added in the current year is multiplied by an index number. How would the following be used in the calculation of this index number?

| Ending inventory <br> at current year cost | Ending inventory <br> at base year cost |
| :--- | :---: |
| $\frac{\text { Numerator }}{\text { Numerator }}$ | Nominator used |
| Denominator | Numerator |
| Not used | Denominator |

69. Cuyler Co. adopted the dollar-value LIFO inventory method on December 31, 2001. Cuyler's entire inventory constitutes a single pool. On December 31, 2001, the inventory was $\$ 400,000$ under the dollar-value LIFO method. Inventory data for 2002 are as follows:

12/31/02 inventory at year-end prices $\quad \$ 550,000$
Relevant price index at year-end (base year 2001) 110
Using dollar value LIFO, Cuyler's inventory at December 31, 2002 is
a. $\$ 440,000$.
b. $\$ 510,000$.
c. $\$ 500,000$.
d. $\$ 550,000$.

## Multiple Choice Answers-CPA Adapted

56. a
57. b
58. d
59. d
60. c
61. c
62. a
63. с
64. c
65. b
66. a
67. a
68. c
69. b

## DERIVATIONS - Computational

| No. | Answer |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 37. | d | \$4,000 + \$2,000 $=\$ 6,000$. |  |  |  |
| 38. | a | \$8,000 - (\$4,000 + \$2,000) = \$2,000. |  |  |  |
| 39. | a | The effect of the errors in ending inventories reverse themselves in the following year. |  |  |  |
| 40. | d | \$260,000 + ( $3 \times \$ 150,000$ ) $=\$ 710,000$. |  |  |  |
| 41. | d | \$500- (\$500 × .02) = \$490. |  |  |  |
| 42. | d | $(\$ 8,000-\$ 500) \times .02=\$ 150$. |  |  |  |
| 43. | b | $\begin{aligned} & (\$ 29,310+\$ 20,600+\$ 28,917) \div(3,000+2,000+2,700)=\$ 10.237 / \text { unit } \\ & \$ 10.237 \times 1,000=\$ 10,237 . \end{aligned}$ |  |  |  |
| 44. | d | $\begin{array}{lll} \text { Avg. on } & 1 / 6 & \$ 49,910 \div 5,000=\$ 9.982 / \text { unit } \\ & 1 / 26= & \$ 53,872 \div 5,200=\$ 10.36 / \text { unit } \end{array}$ |  |  |  |
| 45. | b | $(100 \times \$ 4.20)+(50 \times \$ 4.40)=\$ 640$. |  |  |  |
| 46. | d | $\begin{aligned} & 100+350+70-150=370 \text { units } \\ & (100 \times \$ 4.20)+(270 \times \$ 4.40)=\$ 1,608 . \end{aligned}$ |  |  |  |
| 47. | a | $(\$ 60,000-\$ 30,000)=\$ 30,000$. |  |  |  |
| 48. | a | $\begin{aligned} & \text { Available (purchases) }=3,250 \text { units } \\ & \text { Sales }=2,650 \text { units } \\ & E I=3,250-2,650=600 \text { units } \\ & (400 \times \$ 3.20)+(200 \times \$ 3.10)=\$ 1,900 . \end{aligned}$ |  |  |  |
| 49. | c | $(100 \times \$ 3.2)+(200 \times \$ 3.1)+(200 \times \$ 3.4)+(100 \times \$ 3.5)=\$ 1,970$. |  |  |  |
| Date | $\frac{\text { Purchase }}{(400 @ 3.2)}$ | Sold |  | Balance |  |
| 6/1 |  | 1,280 | 960 | (400@ 3.2) | 1,280 |
| 6/2 | (1,100 @ 3.1) | 3,410 (300 @ 3.2) |  | (100@ 3.2) | 320 |
| 6/3 |  |  |  | (100@ 3.2) |  |
|  |  |  | 2,480 | (1,100 @ 3.1) | 3,730 |
| 6/6 |  | (800 @ 3.1) |  | (100@ 3.2) |  |
| 6/7 | (600@ 3.3) | 1,980 |  | (300@ 3.1) | 1,2503,230 |
|  |  |  |  | (100@ 3.2) |  |
|  |  |  | 1,650 | (300@ 3.1) |  |
|  |  |  |  | (600@ 3.3) |  |
| 6/9 |  | (500@ 3.3) |  | (100@ 3.2) |  |
|  |  |  |  | (300@ 3.1) | 1,580 |
|  |  |  |  | (100@ 3.3) |  |

## DERIVATIONS - Computational (cont.)



| 64. | c | $[(1,600 \times \$ 4.00)+(4,000 \times \$ 4.70)] \div 5,600=\$ 4.50$. |
| :--- | :--- | :--- |
| 65. | a | Conceptual. |
| 66. | c | Conceptual. |
| 67. | c | $(150 \times \$ 42)+(50 \times \$ 44)=\$ 8,500$. |
| 68. | a | Conceptual. |

- 69. b $\$ 550,000 \div 1$ January 6,2002 . The invoice cost was $\$ 25,000$.

0,000
$\$ 400,000+(\$ 100,000 \times 1.1)=\$ 510,000$.

## EXERCISES

Ex. 8-70—Recording purchases at net amounts.
Colaw Co. records purchase discounts lost and uses perpetual inventories. Prepare journal entries in general journal form for the following:
(a) Purchased merchandise costing $\$ 800$ with terms $2 / 10, \mathrm{n} / 30$.
(b) Payment was made thirty days after the purchase.

## Solution 8-70

(a) Inventory (. $98 \times \$ 800$ ) .................................................................................. 784

Accounts Payable
(b) Accounts Payable ............................................................................. 784

Purchase Discounts Lost ................................................................................. 16
Cash $\qquad$

Ex. 8-71—Recording purchases at net amounts.
Alco Co. records purchases at net amounts and uses periodic inventories. Prepare entries for the following:
June 11 Purchased merchandise on account, \$7,000, terms 2/10, n/30.
15 Returned part of June 11 purchase, \$1,000, and received credit on account.
30 Prepared the adjusting entry required for financial statements.

## Solution 8-71

June 11 Purchases $(.98 \times \$ 7,000)$ ..... 6,860Accounts Payable
15 Accounts Payable (. $98 \times \$ 1,000$ ) ..... 980
Purchase Returns and Allowances ..... 980
30 Purchase Discounts Lost (. $02 \times \$ 6,000$ ) ..... 120Accounts Payable120

Ex. 8-72-Comparison of FIFO and LIFO.
During periods of rising prices, the use of FIFO (as compared with LIFO) will result in what effect on the financial statements?

## Solution 8-72

During periods of rising prices, the use of FIFO will result in higher inventory, lower cost of goods sold, and higher gross profit, net income, income taxes, and retained earnings.

Ex. 8-73—FIFO and LIFO inventory methods.
During June, the following changes in inventory item 27 took place:

| June 1 | Balance | 1,400 units @ $\$ 24$ |
| ---: | :--- | ---: |
| 14 | Purchased | 800 units @ $\$ 35$ |
| 24 | Purchased | 700 units @ $\$ 30$ |
| 8 | Sold | 400 units @ $\$ 50$ |
| 10 | Sold | 1,000 units @ $\$ 40$ |
| 29 | Sold | 600 units @ $\$ 44$ |

Perpetual inventories are maintained.

## Instructions

What is the cost of the ending inventory for item 27 under the following methods? (Show calculations.)
(a) FIFO.
(b) LIFO.

## Solution 8-73

(a) $700 @ \$ 30=\$ 21,000$
$200 @ \$ 35=\quad \frac{7,000}{\$ 28,000}$
(b) $800 @ \$ 35=\$ 28,000$ $100 @ \$ 30=\frac{3,000}{}$
\$31,000

Ex. 8-74-FIFO and LIFO inventory methods.
The Pine Shop shows the following data related to an item of inventory:
Inventory, January 1
100 units @ \$5.00

Purchase, January 9
Purchase, January 19
Inventory, January 31

300 units @ \$5.40
90 units @ \$6.00
150 units

## Instructions

(a) What value should be assigned to the ending inventory using FIFO?
(b) What value should be assigned to cost of goods sold using LIFO?

## Solution 8-74

(a) $90 @ \$ 6.00=\$ 540$ 60 @ $\$ 5.40=$ 324 \$864
(b) $90 @ \$ 6.00=\$ 540$ $250 @ \$ 5.40=\quad 1,350$

$$
\$ 1,890
$$

## Ex. 8-75—Perpetual LIFO.

A record of transactions for the month of May was as follows:

| Purchases |  |  |  | Sales |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May | 1 | (balance) | 400 @ \$4.00 | May 3 | 300 | @ \$7.00 |
|  | 4 |  | 1,300 @ \$4.10 | 6 | 1,000 | @ 7.00 |
|  | 8 |  | 800 @ \$4.30 | 12 | 900 | @ 7.50 |
|  | 14 |  | 700 @ \$4.40 | 18 | 400 | @ 7.50 |
|  | 22 |  | 1,200 @ \$4.50 | 25 | 1,400 | @ 8.00 |
|  | 29 |  | 500 @ \$4.75 |  |  |  |

Assuming that perpetual inventory records are kept in dollars, determine the inventory using LIFO.

## Solution 8-75

$100 @ \$ 4.00=\$ 400$
200 @ $\$ 4.10=820$
100 @ $\$ 4.40=440$
500 @ $\$ 4.75=\quad \underline{2,375}$
\$4,035

## Ex. 8-76-Perpetual LIFO and Periodic FIFO.

Seitzer Corporation sells item A as part of its product line. Information as to balances on hand, purchases, and sales of item A are given in the following table for the first six months of 2001.

Quantities

| Date | $\underline{\text { Purchased }}$ | Sold | Balance | Unit Price <br> January 11 |
| :--- | :--- | :---: | :---: | :---: |
| - | - | $\frac{\text { of Purchase }}{300}$ | $\$ 2.50$ |  |


| January 24 | 1,300 | - | 1,600 | $\$ 2.60$ |
| :--- | :---: | :---: | ---: | :---: |
| February 8 | - | 300 | 1,300 | - |
| March 16 | - | 560 | 740 | - |
| June 11 | 600 | - | 1,340 | $\$ 2.80$ |

## Instructions

(a) Compute the ending inventory at June 30 under the perpetual LIFO inventory pricing method.
(b) Compute the cost of goods sold for the first six months under the periodic FIFO inventory pricing method.

## Solution 8-76

(a) | 300 | $@ \$ 2.50=$ | $\$ 750$ |
| ---: | :--- | ---: |
| 440 | $\$ 2.60=$ | 1,144 |
| $\underline{600} @ \$ 2.80=$ | $\underline{1,680}$ |  |
| $\underline{1,340}$ |  | $\underline{\$ 3,574}$ |

(b) 300 @ $\$ 2.50=\$ 750$

560 @ $\$ 2.60=1,456$
$\underline{\underline{860}} \underline{\underline{\$ 2,206}}$

Ex. 8-77—Dollar-value LIFO method.
Part A. Greer Company has a beginning inventory in year one of $\$ 300,000$ and an ending inventory of $\$ 418,000$. The price level has increased from 100 at the beginning of the year to 110 at the end of year one. Calculate the ending inventory under the dollar-value LIFO method.

Part B. At the end of year two, Greer's inventory is $\$ 460,000$ in terms of a price level of 115 which exists at the end of year two. Calculate the inventory at the end of year two continuing the use of the dollar-value LIFO method.

## Solution 8-77

Part A.
Ending Inventory

Inventory
$\frac{\text { at Base-Year Price }}{\text { LIFO }}$
$\$ 418,000 \div 1.10=\$ 380,000$

Computation of Ending Inventory, Year One

| Layers at |  |  | Ending |  |
| :---: | :---: | :---: | :---: | :---: |
| Base-Year Prices |  | Price Index |  | at Dollar-Value |
| \$300,000 | $\times$ | 1.00 | = | \$300,000 |
| \$80,000 | $\times$ | 1.10 | = | 88,000 |
|  |  |  |  | \$388,000 |

## Part B.

Computation of Ending Inventory, Year Two
Ending Inventory
Inventory

| at Base-Year Price | Base-Year Prices |  | Price Index |  | at Dollar-Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| LIFO |  |  |  |  |  |
| \$460,000 $\div 1.15=\$ 400,000$ | \$300,000 | $\times$ | 1.00 | = | \$300,000 |
|  | \$80,000 | $\times$ | 1.10 | = | 88,000 |
|  | \$20,000 | $\times$ | 1.15 | $=$ | 23,000 |
|  |  |  |  |  | \$411,000 |

Ex. 8-78—Analysis of gross profit.
During 2001, Hill’s Drug Company experienced a significant increase in the rate of gross profit on sales, compared with the rate it has averaged in recent years. You are asked to determine the most likely reason for this improvement. Support your answer.

The following data are from the records of the company:
2001 sales (at an average price of $\$ 50$ a unit) were $\$ 1,800,000$.
2001 purchases (at an average cost of $\$ 30$ a unit) were $\$ 960,000$.
The company uses the LIFO inventory method and has used it since 1976.

## Solution 8-78

Four thousand more units were sold than were purchased. This has resulted in the partial liquidation of the beginning LIFO inventory layers. Assuming rising prices, the increased rate of gross profit is most likely due to the matching of old, lower inventory costs against current sales.

Computations
Units sold: $\$ 1,800,000 \div \$ 50=36,000$
Units purchased: $\$ 960,000 \div \$ 30=32,000$

## PROBLEMS

Pr. 8-79—Accounting for purchase discounts.
Neer Corp. purchased merchandise during 2001 on credit for $\$ 150,000$; terms $2 / 10$, $n / 30$. All of the gross liability except $\$ 30,000$ was paid within the discount period. The remainder was paid within the 30 -day term. At the end of the annual accounting period, December 31, 2001, $90 \%$ of the merchandise had been sold and $10 \%$ remained in inventory. The company uses a periodic system.

## Instructions

(a) Assuming that the net method is used for recording purchases, prepare the entries for the purchase and two subsequent payments.
(b) What dollar amounts should be reported for the final inventory and cost of goods sold under the (1) net method; (2) gross method? Assume that there was no beginning inventory.

## Solution 8-79

(a) Purchases $\qquad$ 147,000
Accounts Payable
(To record the purchase at net amount:

- $.98 \times \$ 150,000=\$$ January 6, 2002. The invoice cost was $\$ 25,000$.
,000.)
Accounts Payable ........................................................................................................ 117,600
Cash
(To record payment within the discount period:

$$
\$ 150,000-\$ 30,000=\$ 120,000 ; \ldots \ldots \ldots \ldots \ldots . . . . . . . . . .
$$

Accounts Payable ....................................................................................................... 29,400
Purchase Discounts Lost .............................................................................................. 600
Cash
(To record the final payment.)
(b) (1) Net method:

Purchases: \$147,000
Final inventory: $10 \% \times \$ 147,000=$ 14,700
Cost of goods sold: $90 \% \times \$ 147,000=$
\$132,300
(The $\$ 600$ discount lost is reported in the other expense section of the income statement.)
(2) Gross method:

Purchases:
Less purchase discounts:
$.02 \times \$ 120,000=$
Goods available
Final inventory:
$10 \% \times \$ 147,600=\quad 14,760$
Cost of goods sold:
$90 \% \times \$ 147,600=$
\$150,000

| 2,400 |
| ---: |
| 147,600 |

147,600
\$132,840
(Assuming that the $\$ 2,400$ discount is prorated between the cost of goods sold, $90 \%$, and the final inventory, $10 \%$.)

Purchases:
Less purchase discounts:
$.02 \times \$ 120,000=$
OR Goods available
Final inventory:

$$
10 \% \times \$ 150,000=
$$

Cost of goods sold: $\$ 147,600-\$ 15,000=$
\$150,000
$\begin{array}{r}2,400 \\ \hline\end{array}$
147,600
15,000
\$132,600
(Assuming that the $\$ 2,400$ discount is used to reduce cost of goods sold. Final inventory is carried at the gross amount.)

Pr. 8-80—Analysis of errors.
(All sales and purchases are on credit.)
Indicate in each of the spaces provided the effect of the described errors on the various elements of a company's financial statements. Use the following codes: $\mathrm{O}=$ amount is overstated; $\mathrm{U}=$ amount is understated; NE = no effect. Assume a periodic inventory system.

| Accounts <br> Receivable | Inventory | Accounts <br> Payable | $\underline{\text { Sales }}$ | Cost of <br> Goods Sold |
| :---: | :---: | :---: | :---: | :---: |
| NE | U | NE | NE | O |

1. Goods in transit shipped "f.o.b. destination" by supplier were recorded as a purchase but were excluded from ending inventory.
2. Goods held on consignment were included in inventory count and recorded as a purchase.
3. Goods in transit shipped "f.o.b. shipping point" were not recorded as a sale and were included in ending inventory.
4. Goods were shipped and appro-priately excluded from ending inventory but sale was not recorded.

## Solution 8-80

| 1. | NE | NE | O | NE | O |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2. | NE | O | O | NE | NE |
| 3. | U | O | NE | U | U |
| 4. | U | NE | NE | U | NE |

Pr. 8-81—Inventory cut-off.

Slone Company sells TVs. The perpetual inventory was stated as $\$ 30,500$ on the books at December 31, 2001. At the close of the year, a new approach for compiling inventory was used and apparently a satisfactory cut-off for preparation of financial statements was not made. Some events that occurred are as follows.

1. TVs shipped to a customer January 2, 2002, costing $\$ 5,000$ were included in inventory at December 31, 2001. The sale was recorded in 2002.
2. TVs costing \$15,000 received December 30, 2001, were recorded as received on January 2, 2002.
3. TVs received during 2001 costing $\$ 4,600$ were recorded twice in the inventory account.
4. TVs shipped to a customer December 28, 2001, f.o.b. shipping point, which cost $\$ 12,000$, were not received by the customer until January, 2002. The TVs were included in the ending inventory.
5. TVs on hand that cost $\$ 6,100$ were never recorded on the books.

## Instructions

Compute the correct inventory at December 31, 2001.

## Solution 8-81

| Inventory per books |  |  | \$30,500 |
| :---: | :---: | :---: | :---: |
| Add: | Shipment received 12/30/01 | \$15,000 |  |
|  | TVs on hand | 6,100 | 21,100 |
|  |  |  | 51,600 |
| Deduct: | : TVs recorded twice | 4,600 |  |
|  | TVs shipped 12/28/01 | 12,000 | 16,600 |
| Correct | inventory 12/31/01 |  | \$35,000 |

Pr. 8-82-Inventory methods.
Freed Company was formed on December 1, 2001. The following information is available from Freed's inventory record for Product X .

| January 1, 2002 (beginning inventory) | $\frac{\text { Units }}{1,600}$ | $\frac{\text { Unit Cost }}{\$ 18.00}$ |
| :--- | :--- | :--- |
| Purchases: |  |  |
| $\quad$ January 5, 2002 | 2,600 | $\$ 20.00$ |
| January 25, 2002 | 2,400 | $\$ 21.00$ |
| February 16, 2002 | 1,000 | $\$ 22.00$ |
| March 15, 2002 | 1,800 | $\$ 23.00$ |

A physical inventory on March 31, 2002, shows 2,000 units on hand.

## Pr. 8-82 (cont.)

Instructions
Prepare schedules to compute the ending inventory at March 31, 2002, under each of the following inventory methods:
(a) FIFO.
(b) LIFO.
(c) Weighted-average.

Show supporting computations in good form.

## Solution 8-82

(a)

Freed Company
COMPUTATION OF INVENTORY FOR PRODUCT X
UNDER FIFO INVENTORY METHOD
March 31, 2002

|  | $\underline{\text { Units }}$ | $\underline{\text { Unit Cost }}$ | $\underline{T o t a l ~ C o s t ~}$ |
| :--- | ---: | ---: | ---: |
| March 15, 2002 | 1,800 | $\$ 23.00$ | $\$ 41,400$ |
| February 16, 2002 | $\underline{200}$ | 22.00 | $\underline{4,400}$ |
| March 31, 2002, inventory | $\underline{\underline{2,000}}$ |  | $\underline{\$ 45,800}$ |

(b)

Freed Company
COMPUTATION OF INVENTORY FOR PRODUCT X UNDER LIFO INVENTORY METHOD

March 31, 2002

|  | $\underline{\text { Units }}$ | $\underline{\text { Unit Cost }}$ | $\underline{\text { Total Cost }}$ |
| :--- | :---: | :---: | :---: |
| Beginning inventory | 1,600 | $\$ 18.00$ | $\$ 28,800$ |
| January 5, 2002 (portion) | $\underline{400}$ | 20.00 | $\underline{8,000}$ |
| March 31, 2002, inventory | $\underline{\underline{2,000}}$ |  | $\underline{\$ 36,800}$ |

(c)

Freed Company
COMPUTATION OF INVENTORY FOR PRODUCT X
UNDER WEIGHTED-AVERAGE INVENTORY METHOD
March 31, 2002

|  | $\underline{\text { Units }}$ | $\underline{\text { Unit Cost }}$ | $\underline{\text { Total Cost }}$ |
| :--- | :--- | ---: | ---: |
| Beginning inventory | 1,600 | $\$ 18.00$ | $\$ 28,800$ |
| January 5, 2002 | 2,600 | 20.00 | 52.000 |
| January 25, 2002 | 2,400 | 21.00 | 50,400 |
| February 16, 2002 | 1,000 | 22.00 | 22,000 |
| March 15, 2002 | $\underline{1,800}$ | 23.00 | $\underline{41,400}$ |
| Weighted average cost $(\$ 194,600 \div 9,400)$ | $\underline{\underline{9,400}}$ | $\underline{\underline{\$ 20.70}}$ | $\underline{\underline{\$ 194,600}}$ |
| March 31, 2002, inventory | $\underline{\underline{2,000}}$ | $\underline{\underline{\$ 20.70}}$ | $\underline{\underline{\$ 41,400}}$ |

Pr. 8-83-Dollar-value LIFO.
Diller Company manufactures one product. On December 31, 1999, Diller adopted the dollar-value LIFO inventory method. The inventory on that date using the dollar-value LIFO inventory method was $\$ 200,000$. Inventory data are as follows:

| Year | Inventory at <br> year-end prices | Price index <br> (base year 1999) |
| :---: | :---: | :---: |
| $\$ 294,000$ | 1.05 |  |


| 2001 | 368,000 | 1.15 |
| :--- | :--- | :--- |
| 2002 | 387,500 | 1.25 |

## Instructions

Compute the inventory at December 31, 2000, 2001, and 2002, using the dollar-value LIFO method for each year.

## Solution 8-83



Pr. 8-84—Dollar-value LIFO.
Day Company adopted the dollar-value LIFO inventory method on 12/31/00. On this date, its inventory consisted of the following items.

| $\frac{\text { Item }}{}$ | Number of Units |  | Cost Per Unit |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 200 | $\$ 2.00$ |  |  |
| Y | 600 |  | 5.00 | $\$ 400$ |
|  |  |  | $\underline{3,000}$ |  |
|  |  |  | $\underline{\$ 3,400}$ |  |

Additional information:

1. Units of X in inventory

| December 31 |  |
| :---: | :---: |
| 2001 | $\underline{2002}$ |
| 300 | 400 |
| $\$ 3.00$ | $\$ 3.25$ |
| 800 | 1,200 |
| $\$ 6.00$ | $\$ 6.50$ |

## Instructions

(a) Compute the price index for 2001. Round to 2 decimal places.
(b) Calculate the 12/31/01 inventory. Label all numbers.
(c) Compute the price index for 2002. Round to 2 decimal places.
(d) Calculate the 12/31/02 inventory. Label all numbers.

## Solution 8-84

(a) Ending Inventory

In End of Year Dollars:
X $300 \times \$ 3.00=$
Y $800 \times \$ 6.00=$

Index $=\$ 5,700 \div \$ 4,600=\underline{\underline{1.239} \text { or } 1.24}$
(b) Base Layer

Incremental Layer $\quad \underline{1,200}$
2001 Ending Inventory
\$4,600
(c) Ending Inventory

In End of Year Dollars:
X $400 \times \$ 3.25=$
Y $1,200 \times \$ 6.50=$

Index $=\$ 9,100 \div \$ 6,800=\underline{\underline{1.338} \text { or } 1.34}$
(d)

| Base Layer | $\$ 3,400$ | $\times$ | $1.00=$ | $\$ 3,400$ |
| :--- | ---: | ---: | ---: | ---: |
| Incremental Layer | 1,200 | $\times$ | $1.24=$ | 1,488 |
|  | $\underline{2,200}$ | $\times$ | $1.34=$ | $\underline{2,948}$ |
| 2002 Ending Inventory | $\underline{\$ 6,800}$ |  |  | $\underline{\$ 7,836}$ |

