# CHAPTER 7

## DISCUSSION QUESTIONS

**1.** A manufacturing firm has three types of inventories: (1) raw materials, (2) work-in-process, and (3) finished goods. Raw materials are goods acquired in an undeveloped state that compose a major part of a finished product. Work-in-process inventory is the partly finished products. Finished goods are the completed products waiting for sale.

**2.** The cost of inventory consists of all the costs involved in buying and preparing merchandise for sale. For a manufacturing company, inventory cost for raw materials generally includes the purchase price paid for the materials, freight costs, and receiving and storage costs. The cost of work-in-process inventory includes the cost of raw materials, the cost of production labor, and some share of the cost of the manufacturing overhead required to keep the factory running. The cost of finished goods inventory is the total of the materials, labor, and manufacturing overhead costs used in the production process for those items.

**3.** It is more difficult to account for the inventory of a manufacturing firm than for a merchandising firm because the former has three different types of inventories: raw materials, work-in-process, and finished goods. In addition, the work-in-process and finished goods inventories are composed of raw materials, labor, and manufacturing overhead. Often, it is difficult to measure the amount of labor and manufacturing overhead that should be included in the inventory amounts.

**4.** The buyer owns merchandise being shipped under the terms FOB shipping point; thus, the buyer would generally pay the shipping costs and be responsible for any other ownership costs during shipping.

**5.** The cost of inventory is transferred from an asset to an expense when the inventory is sold. Until sold, inventory is a current asset on the balance sheet. When sold, it becomes part of the cost of goods sold on the statement of comprehensive income.

**6.** With good internal control procedures, a perpetual inventory record provides better control over inventory because it always shows the amount of inventory that should be in the warehouse (except for theft). A periodic inventory record shows only the amount of inventory that was on hand at the beginning of the period. With the periodic method, the inventory account is not adjusted until the next physical count is taken, usually at the end of an accounting period.

**7.** Purchase discounts and purchase returns are accounted for differently with the two methods. With the periodic method, both discounts and returns are accounted for by using separate accounts (Purchase Discounts and Purchase Returns); these are contra accounts to the purchases account. With the perpetual method, discounts and returns are accounted for by crediting Inventory directly. Since a perpetual inventory account always shows the amount of inventory that should be on hand, when inventory is returned to suppliers, the inventory account must be decreased.

**8.** The costs of transporting inventory into a firm are not treated in the same way as the costs of transporting inventory out. The costs of transporting inventory into the firm are treated as an addition to the costs of inventory, whereas costs of transporting inventory out of the firm are delivery expenses (operating expenses). The reason for the different treatments is that the total cost of inventory is the amount paid for the inventory plus those costs necessary to get it ready for sale. For example, if a company located in San Francisco buys inventory in Chicago, that inventory will not be worth anything to the firm until it is in San Francisco and ready for sale. Thus, the total cost of the inventory is the sum of the purchase price and the shipping costs (freight in).

**9.** Missing a purchase discount raises the cost of inventory. Increased inventory cost ultimately means higher cost of goods sold and lower net income.

**10.** With a perpetual system, Inventory is already adjusted to its ending balance (unless there is theft or shrinkage) because the inventory account is adjusted with the recording of every sale and purchase transaction. With a periodic system, the inventory account must be adjusted at the end of the period because no adjustments have been made to the inventory account throughout the period. The closing process, under a periodic method, involves closing net purchases to Inventory and then adjusting Inventory to the appropriate amount. Through this process, the purchases and purchase-related accounts are closed, the inventory account is adjusted to its ending balance, and the cost of goods sold amount ends up in the cost of goods sold account.

**11.** Even though perpetual inventory records should always reflect the amount of inventory actually on hand, the inventory still needs to be counted to discover the extent of theft, spoilage, and clerical errors. Also, a physical count is a good way to identify which inventory is obsolete, broken, damaged, or slow selling.

**12.** The only adjusting entry required to account for inventory with the perpetual method is the entry to reflect any shortage or overage from theft, obsolescence, and accounting errors. All other entries to the inventory account are made when merchandise is purchased, sold, or returned, or when discounts are granted.

**13.** When goods being held on consignment are included in the ending inventory balance,   
inventory is overstated. When ending inventory is overstated, cost of goods sold is   
understated, and the result is an overstatement of both gross margin and net income.

**14.** When inventory is not recorded as a purchase but is included in the inventory balance, the amount of net income is overstated. As shown here, an understatement of the purchase amount results in an understatement of cost of goods sold and a corresponding overstatement of both gross margin and net income.

Beginning inventory xxx (OK)

+ Net purchases xxx (understated)

= Cost of goods avail-

able for sale xxx (understated)

– Ending inventory xxx (OK)

= Cost of goods sold xxx (understated)

Gross margin xxx (overstated)

Net income xxx (overstated)

**15.** When inventory is sold and shipped but not recorded as a sale, net income will be understated. As shown below, when sales are understated and net cost of goods sold is correct, the gross margin and net income will be understated.

Sales revenue xxx (understated)

Cost of goods sold:

Beginning inventory xxx (OK)

+ Net purchases xxx (OK)

= Cost of goods avail-

able for sale xxx (OK)

– Ending inventory xxx (OK)

= Cost of goods sold xxx (OK)

Gross margin xxx (understated

because of

sales)

Net income xxx (understated

because of

sales)

**16.** “Movement of goods” refers to the flow of the actual inventory through the firm; “cost flow” refers to the flow of the costs of the inventory. A firm may have a FIFO physical flow pattern for the inventory, but may use FIFO, or weighted average cost for costing the inventory.

**17.** Inventory should be valued at its net realizable value when it is damaged, used, or obsolete. The net realizable value is the amount that could be realized from the sale of the merchandise. Writing inventory down to its net realizable value before its sale is the conservative approach because it recognizes losses on inventory when they occur instead of when the inventory is sold. It also guarantees that inventories will not be carried on the books at amounts that exceed their future economic benefits.

**18.** It is necessary to know which cost formula for inventory firms are using before comparing their financial records because the cost formula can indicate how closely the reported inventory amounts reflect current inventory costs. For example, a firm using LIFO during inflationary periods will probably have very old inventory costs on its balance sheet, but its statement of comprehensive income will quite   
accurately reflect the amount of real net income earned. On the other hand, a firm that uses FIFO will show relatively accurate current costs of inventory on the balance sheet, but its statement of comprehensive income will show net   
income that is unrealistically high because the cost of goods sold does not consist of current costs. In trying to compare two firms, one using FIFO and one using LIFO, the differences in the inventory and net income amounts might result more from how inventory costs are handled than from differences in amounts of inventory on hand or the profitability of the company.

**19.** The inventory turnover ratio reveals how fast inventory is sold—how long inventory is being held before it is sold. Holding other things constant, the inventory turnover ratio can provide a preliminary indication of how well the organization is managing its inventory.

## PRACTICE EXERCISES

### PE 7–1 (LO1) Inventory Identification

The correct answer is A. Cranes at a construction site have not been purchased with the intent of being resold to customers. The answer is not D because the screws would be considered part of the overhead cost involved in the manufacturing of inventory.

### PE 7–2 (LO1) Costs Included in Inventory

The correct answer is C. The company president’s salary is an example of an administrative expense that does not relate directly to the cost of inventory. The answer is not E because the factory supervisor’s salary is part of manufacturing overhead, which is included in the cost of manufactured inventory.

### PE 7–3 (LO1) Goods in Transit

Collin Wholesale owns the inventory on December 31, 2017. With shipping terms of FOB destination, the *seller* owns the inventory during transit because ownership does not transfer until the goods reach their destination.

### PE 7–4 (LO1) Computing Cost of Goods Sold

Beginning inventory HK$ 60,000

Add: Purchases 250,000

Cost of goods available for sale HK$310,000

Less: Ending inventory 45,000

Cost of goods sold HK$265,000

### PE 7–5 (LO2) Inventory Purchases

(1). and (2).

Perpetual Periodic

Inventory 37,500 Purchases 37,500

Accounts Payable 37,500 Accounts Payable 37,500

### PE 7–6 (LO2) Transportation Costs

(1). and (2).

Perpetual Periodic

Inventory 920 Freight In 920

Cash 920 Cash 920

### PE 7–7 (LO2) Purchase Returns

(1). and (2).

Perpetual Periodic

Accounts Payable 3,000 Accounts Payable 3,000

Inventory 3,000 Purchase Returns 3,000

Returned 20 tables costing ￡150 each; 20 × ￡150 = ￡3,000.

### PE 7–8 (LO2) Purchase Discounts

(1). and (2).

Perpetual Periodic

Accounts Payable 34,500 Accounts Payable 34,500

Inventory 690 Purchase Discounts 690

Cash 33,810 Cash 33,810

Paid for 230 tables [(250 purchased – 20 returned) × ￡150 = $34,500] with a 2% discount (￡34,500 × 0.02 = ￡690).

### PE 7–9 (LO2) Sales

(1). and (2).

Perpetual Periodic

Accounts Receivable 14,000 Accounts Receivable 14,000

Sales (70 × ￡200) 14,000 Sales 14,000

Cost of Goods Sold 10,570

Inventory (70 × ￡151) 10,570

Cost per table

Initial cost ￡150 per table

Transportation ￡920/(250 tables – 20 tables returned) = ￡920/230 tables =

￡4 per table

Discount ￡690/230 tables = ￡3 per table

Total ￡150 + ￡4 –￡3 = ￡151 per table

### PE 7–10 (LO2) Sales Returns

(1). and (2).

Perpetual Periodic

Sales Returns (6 × $200) 1,200 Sales Returns 1,200

Accounts Receivable 1,200 Accounts Receivable 1,200

Inventory (6 × $151) 906

Cost of Goods Sold 906

For computation of the cost per table, refer to PE 7–9.

### PE 7–11 (LO3) Closing Inventory Entries for a Periodic System

(1). Inventory 34,730

Purchase Returns 3,000

Purchase Discounts 690

Freight In 920

Purchases 37,500

(2). Cost of Goods Sold 10,180

Inventory (￡34,730 –￡24,550) 10,180

### PE 7–12 (LO3) Inventory Shrinkage

Cost of Goods Sold 3,500

Inventory (€182,000 – €178,500) 3,500

### PE 7–13 (LO3) Computing Cost of Goods Sold with a Periodic System

Beginning inventory NT$ 6,000

Plus: Net purchases 23,000

Cost of goods available for sale NT$29,000

Less: Ending inventory (7,500)

Cost of goods sold NT$21,500

### PE 7–14 (LO3) Errors in Ending Inventory

Net income is *overstat*ed by €20,000. An ending inventory overstatement reduces the reported cost of goods sold. If cost of goods sold is understated by €20,000, gross margin and net income will both be overstated by €20,000.

PE 7–15 (LO3) Inventory Errors—Multiple Years

2016

Beginning inventory $ XXX (OK)

+ Purchases XXX (OK)

= Cost of goods available for sale $ XXX (OK)

– Ending inventory 2,000 (understated)

= Cost of goods sold $2,000 (overstated)

Net income $2,000 (understated)

Correct net income: $3,000 + $2,000 = $5,000

### PE 7–16 (LO3) Inventory Errors—Multiple Years

2017

Beginning inventory $2,000 (understated)

+ Purchases XXX (OK)

= Cost of goods available for sale $2,000 (understated)

– Ending inventory 450 (overstated)

= Cost of goods sold $2,450 (understated)

Net income $2,450 (overstated)

Correct net income: $3,000 – $2,450 = $550

### PE 7–17 (LO4) Specific Identification Cost Formula

Cameras Costs

Beginning inventory 8 NT$ 800

Net purchases 34 4,000

Goods available for sale 42 NT$4,800

Ending inventory 16 1,755

Cost of goods sold 26 NT$3,045

(1). Cost of goods sold calculation:

4 cameras from beginning inventory, NT$100 each NT$ 400

5 cameras purchased October 3, NT$110 each 550

3 cameras purchased on October 14, NT$115 each 345

14 cameras purchased on October 20, NT$125 each 1,750

Total cost of goods sold (26 units) NT$3,045

### PE 7–17 (LO4) (Continued)

(2). Ending inventory calculation:

4 cameras from beginning inventory, NT$100 each NT$ 400

7 cameras purchased on October 3, NT$110 each 770

4 cameras purchased on October 14, NT$115 each 460

1 camera purchased on October 20, NT$125 125

Total ending inventory (16 units) NT$1,755

### PE 7–18 (LO4) FIFO Cost Formula

Cameras Costs

Beginning inventory 8 NT$ 800

Net purchases 34 4,000

Goods available for sale 42 NT$4,800

Ending inventory 16 1,990

Cost of goods sold 26 NT$2,810

(1). FIFO Cost of goods sold calculation (oldest 26 units):

8 cameras from beginning inventory, NT$100 each NT$ 800

12 cameras purchased October 3, NT$110 each 1,320

6 cameras purchased on October 14, NT$115 each 690

Total cost of goods sold (26 units) NT$2,810

(2). FIFO Ending inventory calculation (newest 16 units):

1 camera purchased on October 14, NT$115 NT$ 115

15 cameras purchased on October 20, NT$125 each 1,875

Total ending inventory (16 units) NT$1,990

### PE 7–19 (LO4) Weighted Average Cost Formula

Cameras Costs

Beginning inventory 8 NT$ 800

Net purchases 34 4,000

Goods available for sale 42 NT$4,800

($4,800/42 units) = $114.286 per unit

(1). Weighted average cost of goods sold: 26 units × NT$114.286 per unit = NT$2,971 (rounded)

(2). Weighted average ending inventory: 16 units × NT$114.286 per unit = NT$1,829 (rounded)

### PE 7–20 (LO5) Lower of Cost or Net Realizable Value

Lower of Cost or Net Realizable Value:

Item A $ 720

Item B 375

Item C 1,100

Total $2,195

### PE 7–21 (LO5) Recording an Inventory Write-Down

Cost of Goods Sold 700

Allowance for Inventory Write-Down 700

### PE 7–22 (LO6) Inventory Turnover

Inventory Turnover = = = 4.29



### PE 7–23 (LO6) Number of Days’ Sales in Inventory

Number of Days’ Sales in Inventory = = = 85.08 days



\*For computation of inventory turnover, refer to PE 7-22.

### PE 7–24 (LO6) Number of Days’ Purchases in Accounts Payable

**Number of Days’ Purchases in Accounts Payable**

=



=

= 49.13 days

\*Average Accounts Payable = (NT$52,000 + NT$46,000)/2 = NT$49,000

## EXERCISES

### E 7–1 (LO1) Goods on Consignment

1. ￡ 30,000 Counted

– 8,000 On consignment from supplier, Jacob Company

+ 10,000 On consignment to customer, Adrienne Company

￡ 32,000 Ending inventory

2. ￡ 27,000 Beginning inventory

+ 59,000 Net purchases

￡ 86,000 Cost of goods available for sale

– 32,000 Ending inventory [determined in part (1)]

￡54,000 Cost of goods sold

3. ￡ 36,000 Counted

+ 4,000 On consignment to customer, Adrienne Company

– 10,000 On consignment from suppliers, Jacov Company

￡30,000 Ending inventory

4. ￡24,000 Beginning inventory

X Net purchases

￡ 77,500 Cost of goods available for sale

– 30,000 Ending inventory [determined in part (3)]

￡47,500 Cost of goods sold

X = ￡47,500 + ￡30,000 –￡24,000 = ￡53,500

E 7-2 (LO1) Determining the Correct Inventory Amount

￡ 594,000 Counted

+ 50,000 Title passed to Beta when goods were shipped

+ 0 No effect

+ 0 No effect

+ 70,000 Title remains with Beta until purchaser receives goods

+ 0 No effect

￡714,000 Ending inventory

### E 7–3 (LO2) Recording Sales Transactions—Perpetual Inventory System

June 24 Accounts Receivable 75,000

Sales Revenue 75,000

Cost of Goods Sold 45,000

Inventory 45,000

*Sold merchandise to Emily Clark, terms 2/10,*

*n/30 (cost is ￡75,000 × 0.60 = ￡45,000).*

30 Cash 39,200

Sales Discounts 800

Accounts Receivable 40,000

*Received partial payment from Emily Clark*

*(discount is ￡40,000 × 0.02 = ￡800).*

June 30 Sales Returns 10,000

Accounts Receivable 10,000

Inventory 6,000

Cost of Goods Sold 6,000

*Accepted return of merchandise that*

*originally sold for $10,000*

*(cost is ￡10,000* × *0.60 = ￡6,000).*

### E 7–4 (LO2) Perpetual Inventory System

Oct. 2 Inventory 27,650

Accounts Payable 27,000

Cash 650

5 Accounts Receivable 8,250

Sales Revenue 8,250

Cost of Goods Sold 4,900

Inventory 4,900

10 Accounts Payable 13,950

Inventory 279\*

Cash 13,671

\*(HK$13,950 × 0.02 = HK$279)

14 Accounts Payable 1,100

Inventory 1,100

19 Cash 4,560

Accounts Receivable 4,560

20 Accounts Payable 11,950\*

Cash 11,950

\*(HK$27,000 – HK$13,950 – HK$1,100)

22 Accounts Receivable 5,200

Sales Revenue 5,200

Cost of Goods Sold 3,800

Inventory 3,800

Oct. 24 Sales Returns 3,250

Cash 3,250

Inventory 1,800

Cost of Goods Sold 1,800

Beginning inventory HK$12,000

27,650

(4,900)

(279)

(1,100)

(3,800)

1,800

Ending inventory HK$31,371

### E 7–5 (LO2) Recording Sales Transactions—Periodic Inventory System

June 24 Accounts Receivable 105,000

Sales Revenue 105,000

*Sold merchandise to Jack Simpson,*

*terms 2/10, n/30.*

30 Cash 58,800

Sales Discounts 1,200

Accounts Receivable 60,000

*Received partial payment from Jack Simpson*

*(discount is ￡60,000 × 0.02 = ￡1,200).*

30 Sales Returns 15,000

Accounts Receivable 15,000

*Accepted return of ￡15,000 of merchandise.*

### E 7–6 (LO2) Cost of Goods Sold Calculations

Able Baker Carter Delmont Eureka

Company Company Company Company Company

Beginning inventory ￡32,000 ￡49,600 (5) €*34,200* (7) €*65,800*  €38,400

Purchases 53,000 (3) 131*,200* 86,000 179,000 (9) 129*,000*

Purchase returns (1) *800* 2,000 3,600 400 4,400

Cost of goods

available for sale 84,200 (4) *178,800* 116,600 (8) *244,400* 163,000

Ending inventory (2) *17,400* 44,400 30,400 57,600 (10) *26,200*

Cost of goods sold 66,800 134,400 (6) *86,200* 186,800 136,800

E 7–6 (LO2) (Continued)

Calculations (in the following order):

(1) ￡32,000 + ￡53,000 –￡84,200 = ￡800

(2) ￡84,200 –￡66,800 = ￡17,400

(3) ￡178,800 + ￡2,000 – ￡49,600 = ￡131,200

(4) ￡134,400 + ￡44,400 = ￡178,800

(5) €116,600 + €3,600 – €86,000 = €34,200

(6) €116,600 – €30,400 = €86,200

(7) €244,400 + €400 – €179,000 = €65,800

(8) €57,600 + €186,800 = €244,400

(9) €163,000 + €4,400 – €38,400 = €129,000

(10) €163,000 – €136,800 = €26,200

### E 7–7 (LO2) Journalizing Inventory Transactions

1. Jan. 24 Purchases 18,000

Accounts Payable 18,000

30 Accounts Payable 18,000

Purchase Discounts (NT$18,000 × 0.02) 360

Cash 17,640

Mar. 14 Purchases 140,000

Freight In 1,150

Accounts Payable 140,000

Cash 1,150

Apr. 1 Accounts Payable 25,000

Purchase Returns 25,000

13 Accounts Payable 115,000

Cash 115,000

2. Beginning inventory $ 23,400

Purchases NT$158,000

Less: Purchase returns (25,000)

Purchase discounts (360)

Add: Freight in 1,150

Net purchases 133,790

Cost of goods available for sale NT$157,190

Less: Ending inventory 26,250

Cost of goods sold NT$130,940

E 7-8 (LO2, 3) Computing Inventory and Cost of Goods Sold

(1) FIFO

Beginning inventory (46 X $1,067) $49,082

Purchases

Sept. 12 (90 X $1,122) $100,980

Sept. 19 (40 X $1,144) 45,760

Sept. 26 (88 X $1,155) 101,640 248,380

Cost of goods available for sale 297,462

Less: Ending inventory (22 X $1,155) 25,410

Cost of goods sold $272,052

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Calculation | | | | | | |
|  |  |  |  |  |  |  |
| Date |  | Units |  | Unit Cost |  | Total Cost |
| 9/1 |  | 46 |  | € 970 |  | € 49,082 |
| 9/12 |  | 90 |  | 1,122 |  | 100,980 |
| 9/19 |  | 40 |  | 1,144 |  | 45,760 |
| 9/26 |  | 66 |  | 1,155 |  | 76,230 |
|  |  | 242 |  |  |  | €272,052 |

Weighted Average Cost

Cost of goods available for sale €297,462

Less: Ending inventory (22 X €1,126.75\*) 24,788.5

Cost of goods sold € 272,673.5

\*Average unit cost is €1,126.75 computed as follows:

|  |  |  |
| --- | --- | --- |
| €297,462 (Cost of goods available for sale) | = | €1,126.75 |
| 264 units (Total units available for sale) |

|  |
| --- |
| Recalculation |
| 242 units X €1,126.75 = €272,673.5 |

(b)

|  |  |  |
| --- | --- | --- |
| FIFO €25,410 (ending inventory) + €272,052 (COGS) = €297,462 | } | Cost of goods available for sale |
| Weighted average cost €24,788.5 (ending inventory) + €272,673.5 (COGS) = €297,462, |

Under both methods, the sum of the ending inventory and cost of goods sold equals the same amount, €297,462, which is the cost of goods available for sale.

E 7–9 (LO3) Adjusting Inventory (Perpetual System)

Cost of Goods Sold 28,000

Inventory 28,000

*To adjust the inventory account balance to*

*current amount per physical count.*

*(HK$120,000 – HK$92,000 = HK$28,000)*

### E 7–10 (LO3) Adjusting Inventory and Closing Entries (Periodic System)

Inventory 195,000

Purchase Returns 5,000

Purchases 200,000

*Closed temporary inventory accounts.*

Cost of Goods Sold 225,000

Inventory 225,000

*To adjust the inventory account to the appropriate*

*balance of ￡95,000. (￡125,000 beginning inventory*

*+ ￡195,000 net purchases –￡95,000 ending inventory*

*= ￡225,000)*

### E 7–11 (LO3) Cost of Goods Sold Calculation

Cost of goods sold:

Inventory January 1, 2017 ￡ 120,000

Purchases ￡780,000

Less: Purchase returns (22,920)

Purchase discounts (2,640)

Add: Freight in 37,200

Net purchases 791,640

Cost of goods available for sale ￡911,640

Less inventory, December 31, 2017 (144,000)

Cost of goods sold ￡767,640

### E 7–12 (LO3) Adjusting Inventory Records for Physical Counts

(a) = €125, (b) = €3.20, (c) = 31, (d) = €1.90

Inventory 11.50

Cost of Goods Sold 11.50

*To adjust inventory after physical count.*

*(€125.00 + €60.80 + €65.10 + €81.70 = €332.60;*

*€332.60 –€321.10 = €11.50)*

E 7–13 (LO3) Inventory Errors

1. a b c

Sales revenue $181,000 $181,000 $156,000

Beginning inventory $ 36,000 $ 36,000 $ 36,000

Net purchases 55,000 55,000 55,000

Cost of goods available for sale $ 91,000 $ 91,000 $ 91,000

Ending inventory (25,000) (14,500) (14,500)

Cost of goods sold $ 66,000 $ 76,500 $ 76,500

Gross margin $115,000 $104,500 $ 79,500

2. The proper method is (b), recording the sale and not counting the inventory.

3. Method (a) overstates gross margin and net income.

### E 7–14 (LO4) Specific Identification Method

1. Cost of goods sold:

Ring A 2 units at NT$600 = NT$1,200

Ring A 3 units at 600 = 1,800

Ring A 1 unit at 650 = 650

Ring B 2 units at 450 = 900

Ring B 2 units at 350 = 700

Ring C 4 units at 200 = 800

Ring C 3 units at 250 = 750

Ring C 1 unit at 250 = 250

NT$7,050

Beginning inventory NT$ 19,650

Net purchases 4,800

Cost of goods available for sale NT$ 24,450

Ending inventory (17,400)

Cost of goods sold NT$ 7,050

Purchases:

4 Type A rings at NT$600 = NT$2,400

2 Type B rings at 450 = 900

5 Type C rings at 300 = 1,500

NT$4,800

Ending inventory:

Ring A 7 units at NT$600 = NT$ 4,200

Ring A 9 units at 650 = 5,850

Ring B 5 units at 300 = 1,500

Ring B 4 units at 350 = 1,400

Ring B 3 units at 450 = 1,350

Ring C 3 units at 200 = 600

Ring C 4 units at 250 = 1,000

Ring C 5 units at 300 = 1,500

NT$17,400

2. Sales:

Ring A 2 units at $1,000 = NT$ 2,000

Ring A 3 units at 1,050 = 3,150

Ring A 1 unit at 1,200 = 1,200

Ring B 2 units at 850 = 1,700

Ring B 2 units at 800 = 1,600

Ring C 4 units at 450 = 1,800

Ring C 3 units at 500 = 1,500

Ring C 1 unit at 550 = 550

NT$13,500

Sales revenue NT$13,500

Cost of goods sold 7,050

Gross margin NT$ 6,450

### E 7–15 (LO4) FIFO Cost Formula

Cost of Goods Sold

Ring Type Units Cost Total Cost

A 6 ￡600 ￡3,600

B 4 300 1,200

C 7 200 1,400

C 1 250 250

￡6,450

Beginning inventory ￡19,650

Net purchases 4,800\*

Cost of goods available for sale ￡24,450

Cost of goods sold 6,450

Ending inventory ￡18,000

\*4 × ￡600 = ￡2,400; 2 × $450 = ￡900; 5 × $300 = ￡1,500;

￡2,400 + ￡900 + ￡1,500 = ￡4,800

E 7–16 (LO4) FIFO and Weighted Average Cost Calculations (Periodic Inventory System)

(a) FIFO

Cost of goods sold ..............................40 computers at NT$1,350 = NT$ 54,000

Cost of goods available for sale NT$150,100

Less cost of goods sold 54,000

Ending inventory................................................................................ NT$ 96,100

Cost of goods available for sale:

Beginning inventory............................. 60 computers at NT$1,350 = NT$ 81,000

Nov. 5 Purchase ............................14 computers at NT$1,400 = 19,600

11 Purchase ............................12 computers at NT$1,500 = 18,000

24 Purchase............................. 18 computers at NT$1,750 = 31,500

Cost of goods available for sale ...................................................... NT$150,100

(b) Weighted Average Cost

Units

Model B computers available for sale 104 (60 + 14 + 12 + 18)

Model B computers sold 40

Model B computers ending inventory 64

Average Cost = = NT$1,443.27 per computer (rounded)



Cost of goods sold 40 computers at NT$1,443.27 = NT$57,731

Ending inventory 64 computers at NT$1,443.27 = NT$92,369

### E 7–17 (LO5) Lower of Cost or Net Realizable Value

1. Purchases 400

Accounts Payable 400

*Purchased 50 standard widgets at $8 each.*

2. Purchases 300

Accounts Payable 300

*Purchased 15 deluxe widgets at $20 each.*

3. There is no entry to write up the inventory. Inventory can never be valued above cost.

4. Cost of Goods Sold 24

Allowance for Inventory Write-Down 24

*To write down deluxe widgets to lower of cost or*

*NRV [12 at $20-($23-$5)].*

5. Cost of Goods Sold 10

Allowance for Inventory Write-Down 10

*To write down standard widgets inventory [10 at*

*$8-($10-$3)].*

6. No entry. Inventory can never be valued above cost.

### E 7–18 (LO5) Lower of Cost or Net Realizable Value

1. The inventory items should be written down to the following amounts (in NT$):

Item Write-Down

Plywood 21 units at $100 ($450 – $350) = $ 2,100

Maple 23 units at $50 ($1,900 – $1,850) = 1,150

Pine 38 units at $50 ($700 – $650) = 1,900

Redwood Not written down —

$5,150

2. a. Applied to each item

Item Write-Down

Plywood $ 2,100

Maple 1,150

Pine 1,900

$5,150

Cost of Goods Sold 5,150

Allowance for Inventory Write-Down 5,150

b. Applied to total inventory

Item Cost Market Difference

Plywood 21 × $ 450 = $ 9,450 21 × $ 350 = $ 7,350

Maple 23 × 1,900 = 43,700 23 × 1,850 = 42,550

Pine 38 × 700 = 26,600 38 × 650 = 24,700

Redwood 16 × 1,600 = 25,600 16 × 1,700 = 27,200

$105,350 $101,800 $3,550

Cost of Goods Sold 3,550

Allowance for Inventory Write-Down 3,550

**E 7-19 (LO5) Computing Lower-of-Cost-or-Net Realizable Value**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Cost** |  | **NRV** |  | **Lower  -of-Cost- or-NRV** |
| **Running shoes** |  | **€ 12,200** |  | **€ 12,600** |  | **€ 12,200** |
| **Tennis shoes** |  | **20,400** |  | **19,200** |  | **19,200** |
| **Basketball shoes** |  | **18,000** |  | **16,750** |  | **16,750** |
| **Total inventory** |  | **€50,600** |  | **€48,550** |  | **€48,150** |

### E 7–20 (LO6) Inventory Ratios

Atkins Inventory turnover: ￡720,000/￡50,000 = 14.4 times

Number of days’ sales in inventory: 365/14.4 = 25.3 days

Burbank Inventory turnover: ￡850,000/￡$86,000 = 9.9 times

Number of days’ sales in inventory: 365/9.9 = 36.9 days

Atkins Computers is handling its inventory more efficiently, as shown by its higher inventory turnover and its lower days’ sales in inventory.

**E7-21 (LO6) Computing Inventory Turnover, and Days in Inventory**

1. **Inventory Turnover**

**2015: [**£**450,000/(50,000+165,000)/2]=4.19**

**2016: [**£**560,000/(165,000+200,000)/2]=3.07**

**2017: [**£**650,000/(200,000+240,000)/2]=2.95**

1. **Number of days in Inventory**

**2015: 365/4.19=87.11 days**

**2016: 365/3.07=118.89 days**

**2017: 365/2.95=123.73 days**

**The inventory turnover ratio decreased by approximately 30% from 2015 to 2017 while the days in inventory increased by almost 42% over the same time period. Both of these changes would be considered negative since it’s better to have a higher inventory turnover and lower days in inventory.**

### E 7–22 (LO6) Analysis of the Operating Cycle

1. Inventory Turnover = [€600,000 × (1 – 0.37)]/[( €114,000 + $87,000)/2] = 3.8

Number of Days’ Sales in Inventory = 365/3.8 = 96 days

2. Average collection period: 44 days = 365/Accounts Receivable Turnover

Accounts Receivable Turnover = 8.3 times

Accounts receivable turnover: 8.3 = €600,000/[(€68,000 + Ending Accounts   
Receivable)/2]

Ending Accounts Receivable = €76,578 (rounded)

3. Beginning inventory €114,000

Purchases ?

Cost of goods available for sale €465,000

Ending inventory (87,000)

Cost of goods sold [€600,000 × (1 – 0.37)] €378,000

Purchases = €351,000

Purchases Turnover = €351,000/[(€36,000 + €42,000)/2] = 9.0 times

Number of Days’ Purchases in Accounts Payable = 365/9.0 = 41 days

4. Dallen pays its suppliers in 41 days, on average. Dallen collects cash from customers in 140 days (96 days + 44 days). So, on average, 99 days (140 days – 41 days) elapse between the time suppliers are paid and the time cash is received from customers.

5. (1) Inventory Turnover = [€600,000 × (1 – 0.37)]/ €87,000 = 4.3

Number of Days’ Sales in Inventory = 365/4.3 = 85 days

(2) Average collection period: 44 days = 365/Accounts Receivable Turnover

Accounts Receivable Turnover = 8.3 times

Accounts receivable turnover: 8.3 = €600,000/Ending Accounts Receivable

Ending Accounts Receivable = €72,289

(3) Beginning inventory €114,000

Purchases ?

Cost of goods available for sale €465,000

Ending inventory (87,000)

Cost of goods sold €378,000

Purchases = €351,000

Purchases Turnover = €351,000/€42,000 = 8.4

Number of Days’ Purchases in Accounts Payable = 365/8.4 = 43 days

(4) Dallen pays its suppliers in 43 days, on average. Dallen collects cash from customers in 129 days (85 days + 44 days). So, on average, 86 days (129 days – 43 days) elapse between the time suppliers are paid and the time cash is received from customers.

## PROBLEMS

### P 7–1 (LO1) What Should Be Included in Inventory?

1. NT$ 61,800

+ 2,000 a

– 1,200 b

+ 2,300 c

+ 8,000 d

+ 900 e (2)

+ 5,100 e (4)

NT$ 78,900 Ending inventory

2. NT$ 79,200 Net purchases (as stated)

– 2,600 e (1)

$ 76,600 Corrected net purchases

$ 38,700 Beginning inventory

+ 76,600 Net purchases

$ 115,300 Cost of goods available for sale

– 78,900 Ending inventory

$ 36,400 Cost of goods sold

P 7–2 (LO2) Perpetual and Periodic Journal Entries

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1. Periodic Inventory System

a. Purchases 20,000

Accounts Payable 20,000

*Purchased 500 automobile*

*tires on account at HK$40 each.*

b. Purchases 24,000

Accounts Payable 24,000

*Purchased 300 truck tires*

*on account at HK$80 each.*

c. Accounts Payable 480

Purchase Returns 480

*Returned 12 automobile*

*tires to supplier.*

d. Accounts Payable 19,520

Cash 19,520

*Paid for automobile tires.*

e. Accounts Payable 12,000

Cash 12,000

*Paid for half of truck tires*

*purchased.*

f. Accounts Payable 12,000

Cash 12,000

*Paid remaining amount*

*owed on truck tires.*

2. Perpetual Inventory System

a. Inventory 20,000

Accounts Payable 20,000

*Purchased 500 automobile*

*tires on account at HK$40 each.*

b. Inventory 24,000

Accounts Payable 24,000

*Purchased 300 truck tires*

*on account at HK$80 each.*

c. Accounts Payable 480

Inventory 480

*Returned 12 automobile*

*tires to supplier.*

d. Accounts Payable 19,520

Cash 19,520

*Paid for automobile tires.*

e. Accounts Payable 12,000

Cash 12,000

*Paid for half of truck tires*

*purchased.*

f. Accounts Payable 12,000

Cash 12,000

*Paid remaining amount*

*owed on truck tires.*

P 7–2 (LO2) (Continued)

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Periodic Inventory System

g. Accounts Receivable 36,000

Sales 36,000

*Sold 400 automobile tires*

*on account at HK$90 each.*

h. Accounts Receivable 30,000

Sales 30,000

*Sold 200 truck tires on*

*account at HK$150 each.*

i. Sales Returns 630

Accounts Receivable 630

*Accepted 7 automobile*

*tires back from customers,*

*HK*$90 each.

Perpetual Inventory System

g. Accounts Receivable 36,000

Sales 36,000

Cost of Goods Sold 16,000

Inventory 16,000

*Sold 400 automobile tires*

*that cost HK$40 each for HK$90*

*each, on account.*

h. Accounts Receivable 30,000

Sales 30,000

Cost of Goods Sold 16,000

Inventory 16,000

*Sold 200 truck tires that*

*cost HK$80 each for HK$150*

*each, on account.*

i. Sales Returns 630

Accounts Receivable 630

Inventory 280

Cost of Goods Sold 280

*Accepted 7 automobile*

*tires (sold for HK$90 each)*

*back from customers;*

*cost HK$40 each.*

P 7–2 (LO2) (Continued)

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3. It is helpful to first look at the inventory and related accounts to see what adjustments are needed.

PERIODIC

|  |  |  |  |
| --- | --- | --- | --- |
| Inventory | | | |
| Auto tires |  |  |  |
| beg. inv. | 4,000 |  |  |
| Truck tires |  |  |  |
| beg. inv. | 5,600 |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Purchases | | | |
| (a) | 20,000 |  |  |
| (b) | 24,000 |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Purchase Returns | | | |
|  |  | (c) | 480 |
|  |  |  |  |
|  |  |  |  |

PERPETUAL

|  |  |  |  |
| --- | --- | --- | --- |
| Inventory | | | |
| Auto tires |  |  |  |
| beg. inv. | 4,000 |  |  |
| Truck tires |  |  |  |
| beg. inv. | 5,600 | (c) | 480 |
| (a) | 20,000 |  |  |
| (b) | 24,000 |  |  |
|  |  | (g) | 16,000 |
| (i) | 280 | (h) | 16,000 |
|  | 21,400 |  |  |
|  |  |  |  |

After posting entries (a)–(i), the inventory

account has a balance of HK$21,400.

P 7–2 (LO2) (Continued)

Chapter 7217

Periodic Inventory System

We now need to make entries to eliminate the balances in all accounts (except Inventory) and add “net purchases” to inventory. The entry is:

Inventory 43,520

Purchase Returns 480

Purchases 44,000

*Closed Net Purchases to Inven-*

*tory. Closing of temporary inven-*

*tory accounts.*

After this entry the inventory account includes the beginning inventory and net purchases, so its total is cost of goods available for sale as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Inventory | | | |
| Auto tires |  |  |  |
| beg. inv. | 4,000 |  |  |
| Truck tires |  |  |  |
| beg. inv. | 5,600 |  |  |
| Net purchases | 43,520 |  |  |
| Goods available | |  |  |
| for sale | 53,120 |  |  |
|  |  |  |  |

Now we need to adjust for ending inventory. We know from the physical count that the ending inventory is:

Auto tires 184 × HK$40 =HK$ 7,360

Truck tires 164 × HK$80 = 13,120

Total HK$20,480

Perpetual Inventory System

Because the physical count of inventory of $20,480 was less than the balance in the inventory account, an adjustment for shrinkage must be made. The entry is:

Cost of Goods Sold 920

Inventory 920

*Adjusted Inventory for shrinkage*

*(HK$21,400 – HK$20,480). Adjustment*

*of Inventory balance to reflect*

*inventory shrinkage.*

The accuracy of this entry can be determined by examining the physical number of tires on hand as follows:

Automobile Truck

Tires Tires

Beg. inv. 100 70

Transaction (a) 500

Transaction (b) 300

Transaction (c) (12)

Transaction (g) (400)

Transaction (h) (200)

Transaction (i) 7

Ending inventory 195 170

Per count 184 164

Shrinkage 11 6

Cost × HK$ 40 × HK$ 80

HK$ 440 HK$ 480

HK$920

P 7–2 (LO2) (Continued)

Periodic Inventory System

To adjust Inventory to the correct amount, it must be credited for HK$32,640 (HK$53,120 – HK$20,480). The entry is:

Cost of Goods Sold 32,640

Inventory 32,640

*Adjustment of Inventory to appropriate ending balance.*

The inventory account balance is now HK$20,480 as shown below.

|  |  |  |  |
| --- | --- | --- | --- |
| Inventory | | | |
| Auto tires |  |  |  |
| beg. inv. | 4,000 | Adjust end. inv. 32,640 | |
| Truck tires |  |  |  |
| beg. inv. | 5,600 |  |  |
| Net purchases | 43,520 |  |  |
| End. inv. | 20,480 |  |  |
|  |  |  |  |

The cost of goods sold account will be closed with other closing entries.

### P 7–3 (LO2) Statement of Comprehensive Income Calculations

The easiest way to solve this problem is to set up the known data in statement of comprehensive income format as follows (ignore comprehensive income):

Stout Company

Statement of Comprehensive Income

For the Year Ended December 31, 2017

Revenues:

Gross sales € (1)

Less sales returns 4,200

Net sales $169,800

Cost of goods sold:

Inventory, January 1, 2017 €22,000

Gross purchases € (2)

Less purchase returns (2,000)

Add freight in 800 (2)

Cost of goods available for sale €84,000

Less inventory, December 31, 2017 (4)

Cost of goods sold (3)

Gross margin € (5)

Operating expenses 7,500

Net income € (6)

Given the above statement, the calculations can be completed in the following order:

(1) Gross sales

€169,800 + €4,200 = $174,000

(2) Net purchases

€ 84,000 Cost of goods

available for sale

– 22,000 Beginning inventory

€ 62,000 Net purchases

Gross purchases

€ 62,000 Net purchases

+ 2,000 Purchase returns

– 800 Less freight in

€ 63,200 Gross purchases

(3) Cost of goods sold

€174,000 = 250% (X)

X = €69,600

(4) Ending inventory

€84,000 – €69,600 = €14,400

(5) Gross margin

€169,800 – €69,600 = €100,200

(6) Net income

€100,200 – €7,500 = €92,700

### P 7–4 (LO2) Statement of Comprehensive Income Calculations

Company Company Company Company

A B C D

Sales revenue €2,000 (4) €*499* €480 €1,310

Beginning inventory 200 76 0 600

Purchases (1) *1,320* 423 480 249

Purchase returns (20) (19) (0) (8) *(19)*

*Cost of goods available*

*for sale 1,500 480 480 830*

Ending inventory 300 110 (6) *155* 195

Cost of goods sold 1,200 370 (7) *325* (9) *635*

Gross margin (2) *800* (5) *129* 155 (10) *675*

Operating expenses 108 22 34 129

Net income (3) *692* 107 121 546

The individual missing numbers are computed as follows, *in the order given. Note:* Cost of goods available for sale has been inserted to simplify the calculation.

Company A:

(1) Since ending inventory is €300 and cost of goods sold is €1,200, goods available for sale must be €1,500. The beginning inventory of $200 and net purchases must total €1,500. Purchases is therefore *€1,320* (€200 + €1,320 minus purchase returns of $20 total €1,500).

(2) Sales revenue (€2,000) minus cost of goods sold (€1,200) equals gross margin (*€800*).

(3) Gross margin (€800) minus operating expenses (€108) equals net income (*€692*).

Company B:

(5) Operating expenses (€22) plus net income (€107) equals gross margin (*€129*).

(4) Gross margin (€129) plus cost of goods sold (€370) equals sales revenue (€*499*).

Company C:

(7) Sales revenue (€480) minus gross margin (€155) equals cost of goods sold (*€325*).

(6) Goods available for sale (€480) minus cost of goods sold (€325) equals ending inventory (*€155*).

Company D:

(10) Net income (€546) plus operating expenses (€129) equals gross margin (*€675*).

(9) Sales revenue (€1,310) minus gross margin (€675) equals cost of goods sold (*€635*).

P 7–4 (LO2) (Continued)

(8) Cost of goods sold (€635) plus ending inventory (€195) equals goods available for sale (€830). Goods available for sale (€830) equals beginning inventory (€600) plus purchases (€249) minus purchase returns (€19).

### P 7–5 (LO3) The Effect of Inventory Errors

1. Net Ending

Purchases Inventory

$ 80,800 $29,800

+ 1,800 + 800

– 3,000 – 300

$ 79,600 $30,300

2. Beginning inventory $ 20,200

Net purchases + 79,600

Cost of goods available for sale $ 99,800

Ending inventory – 30,300

Cost of goods sold $ 69,500

3. Beginning inventory $ 20,200

Net purchases (before correcting) + 80,800

Cost of goods available for sale $101,000

Ending inventory (before correcting) – 29,800

Cost of goods sold (overstated) $ 71,200

Cost of goods sold (correct) – 69,500

Overstatement $ 1,700

### P 7–6 (LO3) Correction of Inventory Errors

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The best way to solve this problem is to remember that inventory overstatements at the beginning of the year reduce net income, and overstatements at the end of the year increase net income as shown below. (Understatements have the opposite effect.)

Overstatement—Beginning of Year

Revenue OK

Cost of goods sold:

Beginning inventory Too high

Purchases OK

Goods available Too high

Ending inventory OK

Cost of goods sold Too high

Gross margin Too low

Expenses OK

Net income Too low

Overstatement—End of Year

Revenue OK

Cost of goods sold:

Beginning inventory OK

Purchases OK

Goods available OK

Ending inventory Too high

Cost of goods sold Too low

Gross margin Too high

Expenses OK

Net income Too high

The correct amount of net income can be calculated by subtracting overstatements of ending inventory and adding overstatements of beginning inventory. Remember that the ending inventory of one period becomes the beginning inventory of the next period.

2014 2015 2016 2017

Reported net income $30,000 $40,000 $35,000 $45,000

Inventory overstatement, beginning of year 3,000

Inventory understatement, beginning of year (4,000) (1,000)

Inventory overstatement, end of year (3,000) (2,000)

Inventory understatement, end of year 4,000 1,000

Correct net income $34,000 $33,000 $39,000 $42,000

### P 7–7 (LO3) The Effect of Inventory Errors

1. The effect of each of these errors on gross margin is as follows:

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(a) No effect (liabilities are understated).

(b) Ending inventory is understated, $4,400.

(c) Net purchases are overstated, $900.

(d) Net purchases are understated, $1,200.

(e) Net purchases are overstated, $3,100.

(f) Ending inventory is overstated, $800.

The following analysis shows how these errors affect cost of goods sold:

Beginning Net Goods Ending Cost of

Error Inventory + Purchases = Available – Inventory = Goods Sold

(a) No effect No effect No effect No effect No effect

(b) No effect No effect No effect $4,400 understated $4,400 overstated

(c) No effect $900 overstated $900 overstated No effect $900 overstated

(d) No effect $1,200 understated $1,200 understated No effect $1,200 understated

(e) No effect $3,100 overstated $3,100 overstated No effect $3,100 overstated

(f) No effect No effect No effect $800 overstated $800 understated

Totals No effect $2,800 overstated $2,800 overstated $3,600 understated $6,400 overstated

If cost of goods sold is overstated by $6,400, gross margin is understated by $6,400. The correct gross margin is $31,400 ($25,000 + $6,400).

2. Since the ending inventory of 2017 becomes the beginning inventory of 2018, net income would be $3,600 overstated.

P 7-8 (LO4) Calculating Ending Inventory, Cost of Goods Sold and Comparing Results

Cost of Goods Available for Sale

Beginning inventory € 5,760

10/6 purchases + 12,480

10/15 purchases + 7,560

10/27 purchases + 8,960

Cost of goods available for sale € 34,760

Ending Inventory in Units:

Units available for sale (120+240+140+160) 660

Sales (200+130+240) - 570

Units remaining in ending inventory 90

Sales Revenue

10/11 sales 14,000

10/22 sales + 10,400

10/29 sales + 19,200

Total sales revenue € 43,600

(a)

1. FIFO

Ending Inventory

10/27 (90@€56) 5,040

Cost of Goods Sold

Cost of goods available for sale 34,760

Ending Inventory - 5,040

Cost of goods sold € 29,720

1. Weighted Average Cost

Weighted Average cost per unit: 34,760/660=52.667

Ending Inventory

(90@€52.667) 4,740

Cost of Goods Sold

Cost of goods available for sale 34,760

Ending Inventory - 4,740

Cost of goods sold € 30,020

(b) Weighted average cost produces the lower ending inventory value and its cost of goods sold is higher than FIFO.

### P 7–9 (LO4) Cost Formulas for Inventory

1. a. FIFO

Beginning inventory units 460

Purchase, January 16 110

Purchase, February 16 105

Purchase, March 10 150

Total units available 825

Units sold:

January 25 (216)

February 27 (307)

March 30 (190)

Total units sold (713)

Ending inventory 112

Units Total Cost

Ending inventory 112 (at NT$28) NT$3,136

Cost of goods sold: Units Total Cost

Beginning inventory 460 (at NT$30) NT$13,800

Purchase, January 16 110 (at NT$32) 3,520

Purchase, February 16 105 (at NT$36) 3,780

Purchase, March 10 38 (at NT$28) 1,064

713 NT$22,164

*Or:*

Cost of goods available for sale NT$25,300

Less ending inventory 3,136

Cost of goods sold NT$22,164

Gross margin:

Sales revenue NT$31,500\*

Less cost of goods sold 22,164

Gross margin NT$ 9,336

\*Sales revenue:

216 at NT$45 = NT$ 9,720

307 at 40 = 12,280

190 at 50 = 9,500

NT$31,500

P 7–9 (LO4) (Continued)

b. Weighted Average cost

Units Total Cost

Beginning inventory 460 (at NT$30) NT$13,800

Purchase, January 16 110 (at NT$32) 3,520

Purchase, February 16 105 (at NT$36) 3,780

Purchase, March 10 150 (at NT$28) 4,200

825 NT$25,300

= NT$30.67 average cost (rounded)



Ending inventory:

112 at NT$30.67 = NT$3,435

Cost of goods sold:

Cost of goods available for sale NT$25,300

Less ending inventory 3,435

Cost of goods sold NT$21,865

Gross margin:

Sales revenue NT$31,500

Less cost of goods sold 21,865

Gross margin NT$ 9,635

2. In this case, the weighted average cost formula results in higher gross margin. The reason for this unusual result is that prices are neither going up nor going down consistently, but are moving randomly in both directions. Since the higher costs are the average costs (not the earliest), the weighted average cost formula keeps more of these costs in inventory than FIFO.

### P 7–10 (LO4) Periodic Inventory System with Different Cost Formulas

1. FIFO

Cases remaining 4,370

Cost of goods available for sale:

5,100 at ￡10.50 ￡ 53,550

1,210 at ￡12.00 14,520

1,050 at ￡12.50 13,125

2,120 at ￡13.00 27,560

9,480 ￡108,755

P 7–10 (LO4) (Continued)

Cost of goods sold:

5,100 cases at ￡10.50 = ￡53,550

10 cases at ￡12.00 = 120

￡53,670

Cost of goods available for sale ￡108,755

Cost of goods sold 53,670

Ending inventory $ 55,085

2. Weighted Average cost

Cost of goods available for sale ￡108,755

Total units available ÷ 9,480

Weighted average cost per unit ￡ 11.47

Cost of goods sold: ￡11.47 × 5,110 =￡58,612

Ending inventory: ￡108,755 –￡58,612 = ￡50,143

P7-11 (LO4) Determining and Analyzing Cost of Goods Sold and Ending Inventory Using FIFO and Weighted Average Cost Formulas

1. Cost of Goods Available for Sale

Beginning inventory € 31,500

3/5 purchases + 84,000

3/13 purchases + 108,000

3/21 purchases + 60,000

3/26 purchases + 66,000

Cost of goods available for sale € 349,500

1. (1) FIFO

Ending Inventory

Units (2,250+5,250+6,000+3,000+3,000-15,000) 4,500

10/27 (3,000@€22+1,500@€20) €96,000

Cost of Goods Sold

Cost of goods available for sale 349,500

Ending Inventory - 96,000

Cost of goods sold € 253,500

(2) Weighted average Cost

Weighted-Average cost per unit: 349,500/19,500=17.92

Ending Inventory

(4,500@€17.92) 80,640

Cost of Goods Sold

Cost of goods available for sale 349,500

Ending Inventory - 80,640

Cost of goods sold € 268,860

**(c) (1) As shown above, FIFO produces the higher inventory amount, €96,000.**

**(2) As shown above, weighted average cost produces the higher cost of goods sold, €268,860**

### P 7–12 (LO6) Calculating and Interpreting Inventory Ratios

1. Number of Days’

Inventory Turnover Sales in Inventory

Captain Geech Boating = 3.11 times = 117days



Merchant Marine = 11.63 times = 31days



2. The results of the ratios show that Captain Geech Boating has more than a third of the year’s inventory on hand, while Merchant Marine has just over one month’s inventory on hand. Captain Geech could be holding inventory longer because it is selling expensive boats, or the company could be carrying too much inventory. Both ratios show that Merchant Marine is managing its inventory more efficiently with a smaller amount of money tied up in inventory.

## ANALYTICAL ASSIGNMENTS

AA 7–1 Why Use a Perpetual System?

Discussion

You should strongly recommend that Eddie switch inventory systems. Explain to him that the perpetual inventory system provides for continually updated inventory and cost of goods sold amounts, whereas the periodic inventory system calculates cost of goods sold and the amount of inventory actually on hand only at the end of the period. You should advise Eddie that although the perpetual inventory system is more time consuming and probably more expensive, it will assist him in identifying shrinkage by continuously tracking inventory; also, it will aid in determining how much shoplifting and other theft is occurring. You should tell him that perhaps small businesses with small amounts of inventory can get by with the periodic inventory system, but that a business like his with large amounts of inventories would greatly benefit from the additional information the perpetual method provides. You should stress to him that, with the technology available today, the perpetual inventory records can easily be maintained and he can minimize inventory holding costs while maximizing customer satisfaction.

AA 7–2 Should We Reduce Inventory?

Discussion

Your advice to Eddie should include the important point that although his business makes its profit by selling inventory, having too much inventory on hand can be very costly. Holding inventory costs money. If, for example, you make $10 by selling one unit of inventory, but it costs $3 to order and store the inventory, the profit shrinks to $7. Assuming customer satisfaction, it is wise to hold just enough inventory to serve those customers. Wasting money on holding inventory is like any other kind of waste and should be eliminated.

AA 7–3 *You Decide:* Should inventory be recorded at cost or net realizable value?

Judgment Call

Issues to be discussed with this question are:

**1.** Unfortunately for Bill, inventory must be recorded at cost. He can provide note disclosure that states the nature of the inventory, what he believes the current market value is, and his methodology for determining that market value. However, for the financial statements to be presented in accordance with GAAP, only the historical costs of inventory can be recorded.

**2.** The issue of at what levels to report inventory is akin to the question of how to value marketable securities on the balance sheet. With marketable securities, sometimes market values can be used depending on the purpose for which the securities are being held. Such flexible accounting standards have not been issued for inventory.

**3.** If the market value of the inventory drops below its cost, however, the inventory must be written down to the lower of cost or net realizable value.

AA 7–4 La-Z-Boy and McDonald’s

Real Company Analysis

**1.** Hopefully, students will realize that McDonald’s number of days’ sales in inventory should be very short (after all, we don’t want to be fed lettuce and tomatoes that have been sitting around for 60 days), and that La-Z-Boy’s number of days’ sales in inventory is probably much longer.

**2.** Number of days’ sales in inventory for McDonald’s:

$5,552.2/[($110.0 + $100.1)/2] = 52.85 times

365 days/52.85 = 6.9 days

Number of days’ sales in inventory for La-Z-Boy:

$921.142/[($147.01 + $156.79)/2] = 6.26 times 365 days/6.26 = 58.3 days

**3.** The two companies deal with entirely different types of inventories. McDonald’s inventory is perishable, so three days seems reasonable. La-Z-Boy, on the other hand, deals with furniture. Furniture is meant to last a long time, and changes in fashion make holding large furniture inventories risky. Fashion changes quickly, but not as quickly as hamburgers can spoil.

AA 7–5 Why No LIFO?

International

Students often think the American way is the way of the world. If inventory is accounted for a certain way in the United States, it must be accounted for the same way around the world. Not so with LIFO. With this case, students are forced to think about the consequences of using the LIFO inventory system.

This case asks students to think about specific issues. In periods of rising prices, a LIFO method will result in older inventory being disclosed on the balance sheet. In periods of prolonged rising prices, it is possible for very old inventory to be carried on the books even though that inventory was sold long ago. In addition, should the company ever dip down into those old inventory layers, the result will be artificially high profits. This result would relate solely to accounting methods and not to firm performance.

As a result of this case, students should become familiar with the risks associated with LIFO and the care that must be taken in comparing financial statements of companies using different accounting methods.

AA 7–6 Shipping Bricks

Ethics

The company would make a journal entry debiting Accounts Receivable and crediting Sales. If the company was using a perpetual inventory system, it would also have to fabricate the purchase of inventory. Then, when the fictitious inventory was sold, an entry would be made debiting Cost of Goods Sold and crediting Inventory.

A fraud like this could not go on forever because the receivables would build up on the balance sheet. Without a real customer to pay the bill, the receivables balance would just get larger and larger. Eventually, someone would perform an analysis of the accounts receivable and determine that a large number of accounts were uncollectible.

In reviewing the financial statements, users would analyze changes in relationships among accounts. For example, cost of goods sold as a percentage of sales may be decreasing if fictitious inventory is being sold. Also, receivables as a percentage of total assets would be increasing at a faster than expected rate.

## EXPANDED MATERIAL

## Discussion Questions

**20.** The LIFO cost formula results in paying the lowest taxes when prices are rising. With LIFO, the most current costs (and the most expensive when prices are rising) flow to the statement of comprehensive income.

**21.** Although the costs of the units on hand and sold after each transaction are the same under FIFO perpetual and FIFO periodic, computation of weighted average cost and LIFO under a perpetual system changes every time a purchase is made. With a perpetual system, the exact timing of these purchases is tracked throughout the period; with a periodic system, the computations are made only at the end of the period.

**22.** When firms cannot count their inventory, they may use various methods to estimate the value of inventory. If a company uses the perpetual method of accounting for inventory and is preparing monthly or quarterly financial statements, the perpetual inventory balance is assumed to be correct. However, with the periodic method, an estimate must be made. The most common method of estimating inventory is the gross margin method. This method uses beginning inventory, purchases, sales, and the historical gross margin percentage to estimate cost of goods sold and ending inventory.

## Practice Exercises

### PE 7–25 (LO7) LIFO Cost Formula

Cameras Costs

Beginning inventory 8 NT$ 800

Net purchases 34 4,000

Goods available for sale 42 NT$4,800

Ending inventory 16 1,680

Cost of goods sold 26 NT$3,120

1. LIFO Cost of goods sold calculation (newest 26 units):

4 cameras purchased October 3, NT$110 each NT$ 440

7 cameras purchased October 14, NT$115 each 805

15 cameras purchased on October 20, NT$125 each 1,875

Total cost of goods sold (26 units) NT$3,120

2. LIFO Ending inventory calculation (oldest 16 units):

8 cameras from beginning inventory, NT$100 each NT$ 800

8 cameras purchased October 3, NT$110 each 880

Total ending inventory (16 units) NT$1,680

### PE 7–26 (LO8) LIFO and a Perpetual Inventory System

LIFO 1. Cost of Goods Sold 2. Ending Inventory

January 16 (200 units) 200 × $17.50 = $3,500 100 × $17.50 = $1,750

July 23 (600 units) 600 × $18.00 = $10,800 100 × $17.50 = $1,750

300 × $18.00 = $5,400

November 1 (1,300 units) 1,200 × $18.25 = $21,900 100 × $17.50 = $1,750

100 × $18.00 = $1,800 200 × $18.00 = $3,600

Total = $38,000 Total = $5,350

### PE 7–27 (LO8) Weighted Average Cost and a Perpetual Inventory System

Weighted Average Cost 1. Cost of Goods Sold 2. Ending Inventory

January 16 (200 units) 200 × $17.50 = $3,500 100 × $17.50 = $1,750

July 23 (600 units)

100 × $17.50 = $ 1,750

900 × $18.00 = 16,200

1,000 $17,950

$17,950/1,000 = $17.95 per unit

600 × $17.95 = $10,770 400 × $17.95 = $7,180

November 1 (1,300 units)

400 × $17.95 = $ 7,180

1,200 × $18.25 = 21,900

1,600 $29,080

$29,080/1,600 = $18.175 per unit

1,300 × $18.175 = $23,627.5 300 × $18.175 = $5,452.5

Total = $37,898 Total = $5,452\*

\*Rounded

### PE 7–28 (LO9) Estimating Inventory

1. and 2.

Last Year % Two Years Ago %

Sales $6,500,000 $6,500,000

Cost of goods sold (estimated) 2,600,000 2,275,000

Gross margin (estimated) $3,900,000\* $4,225,000\*\*

Beginning inventory $1,650,000 $1,650,000

+ Purchases 4,130,000 4,130,000

= Cost of goods available for sale $5,780,000 $5,780,000

– August 17 inventory (estimated) 3,180,000 3,505,000

= Cost of goods sold (estimated) $2,600,000 $2,275,000

\*60% × $6,500,000 = $3,900,000

\*\*65% × $6,500,000 = $4,225,000

## Exercises

### E 7-23 (LO7) LIFO under Periodic Inventory System

Cost of Goods Sold

Ring Type Units Cost Total Cost

A 4 $600 $2,400

A 2 650 1,300

B 2 450 900

B 2 450 900

C 5 300 1,500

C 3 250 750

$7,750

Beginning inventory $19,650

Net purchases 4,800

Cost of goods available for sale $24,450

Cost of goods sold 7,750

Ending inventory $16,700

### E 7–24 (LO7) Cost Formulas for Inventory

1. FIFO

2. LIFO

3. FIFO

4. LIFO

5. FIFO

### E 7–25 (LO8) FIFO, LIFO, and Weighted Average Cost Calculations (Perpetual Inventory System)

1. (a) FIFO

Cost of goods sold:

First sale 4,000 units at $2.00 = $ 8,000

Second sale 3,000 units at 2.00 = 6,000

Third sale 5,000 units at 2.00 = 10,000

$24,000

Remaining Inventory

Number Unit Total Number of Units Total

Date Transaction of Units Cost Cost and Cost Cost

July 1 Beg. inventory 28,000 $2.00 $ 56,000 28,000 @ $2.00 $56,000

5 Sold (4,000) 2.00 (8,000) 24,000 @ $2.00 48,000

13 Purchased 6,000 2.25 13,500 24,000 @ $2.00 61,500

6,000 @ $2.25

17 Sold (3,000) 2.00 (6,000) 21,000 @ $2.00 55,500

6,000 @ $2.25

25 Purchased 8,000 2.50 20,000 21,000 @ $2.00 75,500

6,000 @ $2.25

8,000 @ $2.50

27 Sold (5,000) 2.00 (10,000) 16,000 @ $2.00 $65,500

6,000 @ $2.25 ending

8,000 @ $2.50 inventory

(b) LIFO

Cost of goods sold:

First sale 4,000 units at $2.00 = $ 8,000

Second sale 3,000 units at 2.25 = 6,750

Third sale 5,000 units at 2.50 = 12,500

$27,250

Remaining Inventory

Number Unit Total Number of Units Total

Date Transaction of Units Cost Cost and Cost Cost

July 1 Beg. inventory 28,000 $2.00 $ 56,000 28,000 @ $2.00 $56,000

5 Sold (4,000) 2.00 (8,000) 24,000 @ $2.00 48,000

13 Purchased 6,000 2.25 13,500 24,000 @ $2.00 61,500

6,000 @ $2.25

17 Sold (3,000) 2.25 (6,750) 24,000 @ $2.00 54,750

3,000 @ $2.25

25 Purchased 8,000 2.50 20,000 24,000 @ $2.00 74,750

3,000 @ $2.25

8,000 @ $2.50

27 Sold (5,000) 2.50 (12,500) 24,000 @ $2.00 $62,250

3,000 @ $2.25 ending

3,000 @ $2.50 inventory

(c) Weighted Average Cost

July 1 Beginning inventory 28,000 units at $2.00 = $56,000

5 Cost of goods sold 4,000 units at $2.00 = $ 8,000

24,000 units at $2.00 = $48,000

13 New unit cost 6,000 units at $2.25 = 13,500

30,000 units $61,500

$61,500/30,000 = $2.05 per unit

17 Cost of goods sold 3,000 units at $2.05 = $ 6,150

27,000 units at $2.05 = $55,350

25 New unit cost 8,000 units at $2.50 = 20,000

35,000 units $75,350

$75,350/35,000 = $2.15\* per unit

27 Cost of goods sold 5,000 units at $2.15 = $10,750

Total cost of goods sold $ 8,000

6,150

10,750

$24,900

\*Rounded

Ending inventory $89,500 – $24,900 = $64,600

2. Any of the three cost formulas can be “best,” depending on the objectives of the firm (such as high earnings or low taxes).

### E 7–26 (LO9) Gross Margin Method of Estimating Inventory

1. Sales revenue $550,000

Cost of goods sold:

Beginning inventory $ 95,000

Net purchases 300,000

Cost of goods available for sale $395,000

Less ending inventory ($395,000 – $330,000) 65,000

Cost of goods sold ($550,000 – $220,000) 330,000

Gross margin (0.40 × $550,000) $220,000

E 7–26 (LO9) (Continued)

2. The missing inventory could be a result of the following:

a. Theft

b. A gross margin percentage lower than 40%. For example, if the gross margin percentage has fallen to 30%, the ending inventory would be only $10,000.

c. Physical inventory counting mistakes

d. Accounting errors

### E 7–27 (LO9) Estimating Inventory Amounts (Gross Margin Method)

Sales $80,000

Cost of goods sold:

Beginning inventory $ 6,500

Net purchases 48,000

Cost of goods available for sale $54,500

Ending inventory 2,500\*

Cost of goods sold 52,000

Gross margin (0.35 × $80,000) $28,000

\*$54,500 – $52,000

### E 7–28 (LO9) Estimating Inventory (Gross Margin Method)

Sales $2,000,000

Cost of goods sold:

Beginning inventory $ 300,000

Net purchases 1,600,000

Cost of goods available for sale $1,900,000

Ending inventory 500,000\*

Cost of goods sold 1,400,000

Gross margin (0.30 × $2,000,000) $ 600,000

\*$1,900,000 – $1,400,000

Computed ending inventory $500,000

Actual ending inventory 450,000

Missing inventory $ 50,000

### E 7-29 (LO9) Estimated Inventory (Retail Inventory Method)

**Goods available for sale at cost = NT$52,500 + NT$141,750 = NT$194,250**

**Goods available for sale at retailing price = NT$143,200 + NT$411,800**

**= NT$555,000**

**Cost-to-retail percentage = NT$194,250/NT$555,000=35%**

**Cost of goods sold = NT$488,700 X 35% = NT$171,045**

**Cost of ending inventory = NT$194,250 NT$171,045 = NT$23,205**

### E 7-30 (LO9) Estimated Inventory (Retail Inventory Method)

**1. Goods available for sale at cost = NT$313,500 + NT$1,202,280 = NT$1,515,780**

**Goods available for sale at retailing price = NT$773,450 + NT$3,236,550**

**= NT$4,010,000**

**Cost-to-retail percentage =NT$1,515,780/NT$4,010,000= 37.8%**

**Cost of goods sold = (NT$3,788,000 NT$38,000) 37.8% = NT$1,417,500**

**Cost of ending inventory = NT$1,515,780 NT$1,417,500 = NT$98,280**

**2. NT$90,150 NT$98,280 = NT$(8,130)**

## Problems

### P 7-13 (LO7) LIFO under Periodic System

LIFO

Units Total Cost

Ending inventory 112 (at $30) $3,360

Cost of goods sold: Units Total Cost

Purchase, March 10 150 (at $28) $ 4,200

Purchase, February 16 105 (at $36) 3,780

Purchase, January 16 110 (at $32) 3,520

Beginning inventory 348 (at $30) 10,440

713 $21,940

*Or:*

Cost of goods available for sale $25,300

Less ending inventory 3,360

Cost of goods sold $21,940

Gross margin:

Sales revenue $31,500

Less cost of goods sold 21,940

Gross margin $ 9,560

### P 7-14 (LO7) LIFO under Periodic System

LIFO

Cost of goods sold:

2,120 cases at $13.00 = $27,560

1,050 cases at $12.50 = 13,125

1,210 cases at $12.00 = 14,520

730 cases at $10.50 = 7,665

$62,870

Cost of goods available for sale $108,755

Cost of goods sold 62,870

Ending inventory $ 45,885

P 7–15 (LO8) Unifying Concepts: Cost Formulas for Inventory

1. FIFO

Total cases available 8,300

Total cases sold 4,300

Total cases remaining 4,000

Cost of goods available for sale:

4,100 at $10.50 = $43,050

1,500 at 11.00 = 16,500

1,000 at 11.00 = 11,000

1,700 at 11.50 = 19,550

$90,100

Cost of goods sold:

First sale 950 cases at $10.50 = $ 9,975

Second sale 1,450 cases at 10.50 = 15,225

Third sale 1,700 cases at 10.50 = 17,850

200 cases at 11.00 = 2,200

$45,250

Cost of goods available for sale $90,100

Cost of goods sold 45,250

Ending inventory $44,850

2. LIFO

Cost of goods sold:

First sale 950 cases at $11.00 = $10,450

Second sale 1,000 cases at 11.00 = 11,000

450 cases at 11.00 = 4,950

Third sale 1,700 cases at 11.50 = 19,550

100 cases at 11.00 = 1,100

100 cases at 10.50 = 1,050

$48,100

Cost of goods available for sale $90,100

Cost of goods sold 48,100

Ending inventory $42,000

P 7–15 (LO8) (Continued)

3. Weighted average cost

4,100 at $10.50 = $43,050

Aug. 4 New cost per unit = 1,500 at 11.00 = 16,500

5,600 $59,550

$59,550/5,600 units = $10.63 per unit

4,650 at $10.63 = $49,430

Aug. 13 New cost per unit = 1,000 at 11.00 = 11,000

5,650 $60,430

$60,430/5,650 units = $10.70 per unit

4,200 at $10.70 = $44,940

Aug. 26 New cost per unit = 1,700 at 11.50 = 19,550

5,900 $64,490

$64,490/5,900 units = $10.93 per unit

Cost of goods sold:

$ 90,100

– 43,720 (4,000 cases at $10.93 per case) Ending inventory

$ 46,380 Cost of goods sold

### P 7–16 (LO8) Perpetual Inventory System with Different Cost Formulas

Cost of goods available for sale (Same under all cost formulas)

Unit Number

Cost of Units Amount

Beginning inventory $30 460 $13,800

Purchases 32 110 3,520

36 105 3,780

28 150 4,200

825 $25,300

P 7–16 (LO8) (Continued)

1. a. FIFO

Remaining Inventory

Number

Number Unit Total of Units Total

Date Transaction of Units Cost Cost and Cost Cost

Jan. 1 Beg. inventory 460 $30 $13,800 460 @ $30 $13,800

16 Purchase 110 32 3,520 460 @ $30 17,320

110 @ $32

25 Sale (216) 30 (6,480) 244 @ $30 10,840

110 @ $32

Feb. 16 Purchase 105 36 3,780 244 @ $30 14,620

110 @ $32

105 @ $36

27 Sale (307) 244 @ $30 (9,336) 47 @ $32 5,284

63 @ $32 105 @ $36

Mar. 10 Purchase 150 28 4,200 47 @ $32 9,484

105 @ $36

150 @ $28

30 Sale (190) 47 @ $32 (6,348) 112 @ $28 $ 3,136

105 @ $36

38 @ $28

Sales (Same under all assumptions)

216 @ $45 = $ 9,720

307 @ $40 = 12,280

190 @ $50 = 9,500

$31,500

Sales $31,500

Cost of goods available for sale $25,300

Ending inventory 3,136

Cost of goods sold 22,164

Gross margin $ 9,336

P 7–16 (LO8) (Continued)

b. LIFO

Remaining Inventory

Number

Number Unit Total of Units Total

Date Transaction of Units Cost Cost and Cost Cost

Jan. 1 Beg. inventory 460 $30 $13,800 460 @ $30 $13,800

16 Purchase 110 32 3,520 460 @ $30 17,320

110 @ $32

25 Sale (216) 110 @ $32 (6,700) 354 @ $30 10,620

106 @ $30

Feb. 16 Purchase 105 36 3,780 354 @ $30 14,400

105 @ $36

27 Sale (307) 105 @ $36 (9,840) 152 @ $30 4,560

202 @ $30

Mar. 10 Purchase 150 28 4,200 152 @ $30 8,760

150 @ $28

30 Sale (190) 150 @ $28 (5,400) 112 @ $30 $ 3,360

40 @ $30

Sales $31,500

Cost of goods available for sale $25,300

Ending inventory 3,360

Cost of goods sold 21,940

Gross margin $ 9,560

c. Weighted average cost

Number of Total Average

Date Transaction Units and Cost Cost†  Cost

Jan. 1 Beg. inventory 460 @ $30 $13,800

16 Purchase 110 @ $32 3,520

Average cost ($17,320 ÷ 570 units) $17,320 $30.39

25 Sale (216 @ $30.39) (6,564)

Remaining inventory 354 @ $30.39 $10,756

Feb. 16 Purchase 105 @ $36 3,780

($14,536 ÷ 459 units) $14,536 $31.67

27 Sale (307 @ $31.67) (9,723)

Remaining inventory 152 @ $31.67 $ 4,813

Mar. 10 Purchase 150 @ $28 4,200

($9,013 ÷ 302 units) $ 9,013 $29.84

30 Sale (190 @ $29.84) (5,670)

Remaining inventory 112 @ $29.84 $ 3,343

†Differences due to rounding.

P 7–16 (LO8) (Continued)

Sales $31,500

Cost of goods available for sale $25,300

Ending inventory 3,343

Cost of goods sold 21,957

Gross margin $ 9,543

2. LIFO results in the highest gross margin because it includes the full amount of the lowest cost ($28) in Cost of Goods Sold.

### P 7–17 (LO9) Unifying Concepts: Inventory Estimation Methods

1. Gross Margin Method:

Sales revenue $410,000

Cost of goods sold:

Beginning inventory $ 60,000

Net purchases 215,000

Cost of goods available for sale $275,000

Ending inventory ($275,000 – $221,400) 53,600

Cost of goods sold ($410,000 – $188,600) 221,400

Gross margin ($410,000 × 0.46) $188,600

The cost of the ending inventory using the gross margin method is $53,600.

2. Goods available for sale at cost = $60,000 + $215,000 = $275,000

**Goods available for sale at retailing price = $95,000 + $400,000**

**= $495,000**

**Cost-to-retail percentage = $275,000/$495,000=55.6%**

**Cost of goods sold = $410,000 X 55.6% = $227,960**

**Cost of ending inventory = $275,000 $227,960 = $47,040**

## ANALYTICAL ASSIGNMENTS

AA 7–7 General Electric

Real Company Analysis

**1.** **a.** Number of days’ sales in inventory using FIFO

$59,905/[($17,751 + $22,309)/2] = 2,99 times

365 days/2.99 =122.07days

**b.** Number of days’ sales in inventory using LIFO

$59,905/[($17,689 + $22,515/2] = 2.98 times

365 days/2.98 = 122.48days

In periods of low inflation, the differences between LIFO and FIFO may not result in large differences in inventory computations. However, in periods of sharply rising prices, the differences can be dramatic.

2. If it takes GE between 89 and 93 days to sell its inventory while vendors expect payment in 30 days, then GE is going to have to finance the remaining 59 to 63 days out of its own pocket or by borrowing. If GE sells inventory on account, then the firm must wait even longer before it receives money to pay for the inventory, thereby making the problem even more severe.

## SOLUTIONS TO "STOP & THINK"

***Stop & Think (p. 264):*** Should the returned inventory be recorded at its original cost of $10 per shirt?

The original cost of the shirts was $10. However, the fact that customers have returned them may mean that something is wrong with the shirts. If the shirts are damaged and can be sold for, say, $6, then they should be recorded at no more than this $6 amount. Recording inventory at less than its original cost is discussed in the expanded material section of this chapter.