PRACTICE MULTIPLE-CHOICE QUESTIONS

**6-1.** (LO 1)

Which of the following should **not**be included in the physical inventory of a company?

(a) Goods held on consignment from another company.

(b) Goods shipped on consignment to another company.

(c) Goods in transit from another company shipped FOB shipping point.

(d) All of the above should be included.

**Answer**

(a) Goods held on consignment from another company.

**6-2.** (LO 1)

As a result of a thorough physical inventory, Railway Company, Ltd. determined that it had inventory worth €180,000 at December 31, 2017. This count did not take into consideration the following facts. Rogers Consignment store currently has goods worth €35,000 on its sales floor that belong to Railway but are being sold on consignment by Rogers. The selling price of these goods is €50,000. Railway purchased €13,000 of goods that were shipped on December 27, FOB destination, that will be received by Railway on January 3. Determine the correct amount of inventory that Railway should report.

(a) €230,000.

(b) €215,000.

(c) €228,000.

(d) €193,000.

**Answer**

(b) €215,000.

**6-3.** (LO 2)

Cost of goods available for sale consists of two elements: beginning inventory and:

(a) ending inventory.

(b) cost of goods purchased.

(c) cost of goods sold.

(d) All of the answers are correct.

**Answer**

(b) cost of goods purchased.

**6-4.** (LO 2)

Tinker Bell Company has the following:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Units** |  | **Unit Cost** |
| Inventory, Jan. 1 | 8,000 |  | £11 |
| Purchase, June 19 | 13,000 |  | 12 |
| Purchase, Nov. 8 | 5,000 |  | 13 |

If Tinker Bell has 9,000 units on hand at December 31, the cost of the ending inventory under FIFO is:

(a) £99,000.

(b) £108,000.

(c) £113,000.

(d) £117,000.

**Answer**

(c) $113,000.

**6-5.** (LO 2)

Davidson Electronics has the following:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Units** |  | **Unit Cost** |
| Inventory, Jan. 1 | 5,000 |  | £8 |
| Purchase, April 2 | 15,000 |  | £10 |
| Purchase, Aug. 28 | 20,000 |  | £12 |

If Davidson has 7,000 units on hand at December 31, the cost of ending inventory under the average-cost method is:

(a) £84,000.

(b) £70,000.

(c) £56,000.

(d) £75,250.

**Answer**

(d) £75,250.

**6-6.** (LO 3)

In periods of rising prices, average-cost will produce:

(a) higher net income than FIFO.

(b) the same net income as FIFO.

(c) lower net income than FIFO.

(d) net income equal to the specific identification method.

**Answer**

(c) lower net income than FIFO.

**6-7.** (LO 3)

Factors that affect the selection of an inventory costing method do **not**include:

(a) tax effects.

(b) statement of financial position effects.

(c) income statement effects.

(d) perpetual vs. periodic inventory system.

**Answer**

(d) perpetual vs. periodic inventory system.

**6-8.** (LO 4)

Rickety Company purchased 1,000 widgets and has 200 widgets in its ending inventory at a cost of HK$91 each and a net realizable value of HK$80 each. The ending inventory under LCNRV is:

(a) HK$91,000.

(b) HK$80,000.

(c) HK$18,200.

(d) HK$16,000.

**Answer**

(d) HK$16,000.

**6-9.** (LO 5)

Atlantis Company's ending inventory is understated NT$122,000. The effects of this error on the current year's cost of goods sold and net income, respectively, are:

(a) understated, overstated.

(b) overstated, understated.

(c) overstated, overstated.

(d) understated, understated.

**Answer**

(b) overstated, understated.

**6-10.** (LO 4)

Lee Company overstated its inventory by NT$500,000 at December 31, 2016. It did not correct the error in 2016 or 2017. As a result, Lee's equity was:

(a) overstated at December 31, 2016, and understated at December 31, 2017.

(b) overstated at December 31, 2016, and properly stated at December 31, 2017.

(c) understated at December 31, 2016, and understated at December 31, 2017.

(d) overstated at December 31, 2016, and overstated at December 31, 2017.

**Answer**

(b) overstated at December 31, 2016, and properly stated at December 31, 2017.

**6-11.** (LO 6)

Which of these would cause the inventory turnover ratio to increase the most?

(a) Increasing the amount of inventory on hand.

(b) Keeping the amount of inventory on hand constant but increasing sales.

(c) Keeping the amount of inventory on hand constant but decreasing sales.

(d) Decreasing the amount of inventory on hand and increasing sales.

**Answer**

(d) Decreasing the amount of inventory on hand and increasing sales.

**6-12.** (LO 5)

Carlos Company SLU had beginning inventory of €80,000, ending inventory of €110,000, cost of goods sold of €285,000, and sales of €475,000. Carlos' days in inventory is:

(a) 73 days.

(b) 121.7 days.

(c) 102.5 days.

(d) 84.5 days.

**Answer**

(b) 121.7 days.

**\*6-13.** (LO 8)

Songbird Company has sales of £150,000 and cost of goods available for sale of £135,000. If the gross profit rate is 30%, the estimated cost of the ending inventory under the gross profit method is:

(a) £15,000.

(b) £30,000.

(c) £45,000.

(d) £75,000.

**Answer**

(b) £30,000.

**\*6-14.** (LO 7)

In a perpetual inventory system:

(a) specific identification is always used.

(b) average costs are computed as a simple average of unit costs incurred.

(c) a new average is computed under the average-cost method after each sale.

(d) FIFO cost of goods sold will be the same as in a periodic inventory system.

**Answer**

(d) FIFO cost of goods sold will be the same as in a periodic inventory system.

**\*6-15.** (LO 9)

Using the data in Question 6-4, the cost of the ending inventory under LIFO is:

(a) £113,000.

(b) £108,000.

(c) £99,000.

(d) £100,000.

**Answer**

(d) £100,000.

QUESTIONS

**6-1.** “The key to successful business operations is effective inventory management.” Do you agree? Explain.

**6-2.** An item must possess two characteristics to be classified as inventory by a merchandiser. What are these two characteristics?

**6-3.** Your friend Art Mega has been hired to help take the physical inventory in Jaegar Hardware Store. Explain to Art Mega what this job will entail.

**6-4.** (a) Girard Company ships merchandise to Liu Company on December 30. The merchandise reaches the buyer on January 6. Indicate the terms of sale that will result in the goods being included in (1) Girard's December 31 inventory, and (2) Liu's December 31 inventory.

(b) Under what circumstances should Girard Company include consigned goods in its inventory?

**6-5.** Topp Hat Shop received a shipment of hats for which it paid the wholesaler £2,970. The price of the hats was £3,000, but Topp was given a £30 cash discount and required to pay freight charges of £80. In addition, Topp paid £130 to cover the travel expenses of an employee who negotiated the purchase of the hats. What amount will Topp record for inventory? Why?

**6-6.** Explain the difference between the terms FOB shipping point and FOB destination.

**6-7.** Min-jun believes that the allocation of inventoriable costs should be based on the actual physical flow of the goods. Explain to Min-jun why this may be both impractical and inappropriate.

**6-8.** What is a major advantage and a major disadvantage of the specific identification method of inventory costing?

**6-9.** “The selection of an inventory cost flow method is a decision made by accountants.” Do you agree? Explain. Once a method has been selected, what accounting requirement applies?

**6-10.** Which assumed inventory cost flow method:

(a) usually parallels the actual physical flow of merchandise?

(b) assumes that goods available for sale during an accounting period are identical?

(c) assumes that the first units purchased are the first to be sold?

**6-11.** Beatriz Diaz is studying for the next accounting mid-term examination. What should Beatriz Diaz know about (a) departing from the cost basis of accounting for inventories and (b) the meaning of “net realizable value” in the lower-of-cost-or-net realizable value method?

**6-12.** Beethovan Music Center has 5 televisions on hand at the statement of financial position date. Each cost €100. The net realizable value is €90 per unit. Under the lower-of-cost-or-net realizable value basis of accounting for inventories, what value should be reported for the televisions on the statement of financial position? Why?

**6-13.** Maggie Stores has 20 toasters on hand at the statement of financial position date. Each cost £28. The net realizable value is £30 per unit. Under the lower-of-cost-or-net realizable value basis of accounting for inventories, what value should Maggie report for the toasters on the statement of financial position? Why?

**6-14.** Bakkar Company discovers in 2017 that its ending inventory at December 31, 2016, was €7,600 understated. What effect will this error have on (a) 2016 net income, (b) 2017 net income, and (c) the combined net income for the 2 years?

**6-15.** Xu Company's statement of financial position shows Inventory HK$1,628,000. What additional disclosures should be made?

**6-16.** Under what circumstances might inventory turnover be too high? That is, what possible negative consequences might occur?

**\*6-17.** How does the average-cost method of inventory costing differ between a perpetual inventory system and a periodic inventory system?

**\*6-18.** When is it necessary to estimate inventories?

**\*6-19.** Both the gross profit method and the retail inventory method are based on averages. For each method, indicate the average used, how it is determined, and how it is applied.

**\*6-20.** Szabo Company has net sales of €400,000 and cost of goods available for sale of €300,000. If the gross profit rate is 40%, what is the estimated cost of the ending inventory? Show computations.

**\*6-21.** Park Shoe Shop, Ltd. had goods available for sale in 2017 with a retail price of £120,000. The cost of these goods was £84,000. If sales during the period were £90,000, what is the ending inventory at cost using the retail inventory method?

**\*6-22.** In a period of rising prices, the inventory reported in Kanth Company's statement of financial position is close to the current cost of the inventory. Phelan Company's inventory is considerably below its current cost. Identify the inventory cost flow method being used by each company. Which company has probably been reporting the higher gross profit?

**\*6-23.** “When perpetual inventory records are kept, the results under the FIFO and LIFO methods are the same as they would be in a periodic inventory system.” Do you agree? Explain.

**6-24.** Why might the use of the LIFO method for costing inventories result in lower income taxes?

BRIEF EXERCISES

**BE6-1.** *Identify items to be included in taking a physical inventory*.

(LO 1)

Lazio Company, SpA identifies the following items for possible inclusion in the taking of a physical inventory. Indicate whether each item should be included or excluded from the inventory taking.

(a) Goods shipped on consignment by Lazio to another company.

(b) Goods in transit from a supplier shipped FOB destination.

(c) Goods sold but being held for customer pickup.

(d) Goods held on consignment from another company.

**BE6-2.** *Determine ending inventory amount*.

(LO 1)

Stallman Company took a physical inventory on December 31 and determined that goods costing €200,000 were on hand. Not included in the physical count were €25,000 of goods purchased from Pelzer Corporation, FOB shipping point, and €22,000 of goods sold to Alvarez Company for €30,000, FOB destination. Both the Pelzar purchase and the Alvarez sale were in transit at year-end. What amount should Stallman report as its December 31 inventory?

**BE6-3.** *Compute ending inventory using FIFO and average-cost*.

(LO 2)

In its first month of operations, Tatung Company made three purchases of merchandise in the following sequence: (1) 300 units at NT$180, (2) 400 units at NT$210, and (3) 200 units at NT$240. Assuming there are 420 units on hand, compute the cost of the ending inventory under the (a) FIFO method and (b) average-cost method. Tatung uses a periodic inventory system. (Round average unit cost to two decimal places.)

**BE6-4.** *Explain the financial statement effect of inventory cost flow assumptions*.

(LO 3)

The management of Muni Corp. is considering the effects of inventory-costing methods on its financial statements and its income tax expense. Assuming that the price the company pays for inventory is increasing, which method will:

(a) Provide the higher net income?

(b) Provide the higher ending inventory?

(c) Result in the lower income tax expense?

(d) Result in the more stable earnings over a number of years?

**BE6-5.** *Determine the LCNRV valuation using inventory categories*.

(LO 4)

Blackburn Appliance Center accumulates the following cost and net realizable value data at December 31.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Inventory Categories** |  | **Cost Data** |  | **Net Realizable Value** |
| Cameras |  | £12,000 |  | £12,100 |
| Camcorders |  | 9,420 |  | 9,200 |
| Blue-ray player |  | 14,000 |  | 12,800 |

Compute the lower-of-cost-or-net realizable value valuation for the company's total inventory.

**BE6-6.** *Determine correct income statement amounts*.

(LO 5)

Farr Company reports net income of $90,000 in 2017. However, ending inventory was understated $5,000. What is the correct net income for 2017? What effect, if any, will this error have on total assets as reported in the statement of financial position at December 31, 2017?

**BE6-7.** *Compute inventory turnover and days in inventory*.

(LO 6)

At December 31, 2017, the following information was available for Tai Lin Company: ending inventory HK$400,000, beginning inventory HK$580,000, cost of goods sold HK$2,842,000, and sales revenue HK$3,800,000. Calculate inventory turnover and days in inventory for Tai Lin Company, Ltd.

**\*BE6-8.** *Apply cost flow methods to perpetual inventory records*.

(LO 7)

Abbott's Department Store, Ltd. uses a perpetual inventory system. Data for product E2-D2 include the following purchases.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** |  | **Number of Units** |  | **Unit Price** |
| May 7 |  | 50 |  | £11 |
| July 28 |  | 50 |  | 13 |

On June 1, Abbott's sold 30 units, and on August 27, 35 more units. Prepare the perpetual inventory schedule for the above transactions using (a) FIFO and (b) moving-average cost.

**\*BE6-9.** *Apply the gross profit method*.

(LO 8)

At May 31, Chang Company has net sales of ¥330,000 and cost of goods available for sale of ¥230,000. Compute the estimated cost of the ending inventory, assuming the gross profit rate is 45%.

**\*BE6-10.** *Apply the retail inventory method*.

(LO 8)

On June 30, Lyon Fabrics, SA has the following data pertaining to the retail inventory method: goods available for sale: at cost €35,000, at retail €50,000; net sales €42,000; and ending inventory at retail €8,000. Compute the estimated cost of the ending inventory using the retail inventory method.

**\*BE6-11.** *Compute the ending inventory using LIFO (periodic)*.

(LO 9)

Data for Tatung Company are presented in BE6-3. Compute the cost of the ending inventory under the LIFO method, assuming there are 420 units on hand.

**DO IT! REVIEW**

**DO IT! 6-1.** *Apply rules of ownership to determine inventory cost*.

(LO 1)

Recife Company just took its physical inventory. The count of inventory items on hand at the company's business locations resulted in a total inventory cost of R$300,000. In reviewing the details of the count and related inventory transactions, you have discovered the following.

1. Recife has sent inventory costing R$18,000 on consignment to Rio Company. All of this inventory was at Rio's showrooms on December 31.

2. The company did not include in the inventory count (cost, R$20,000) that was purchased on December 28, terms FOB shipping point. The goods were in transit on December 31.

3. The company did not include in the count inventory (cost, R$17,000) that was sold with terms of FOB shipping point. The goods were in transit on December 31.

Compute the correct December 31 inventory.

**DO IT! 6-2.** *Compute cost of goods sold under different cost flow methods*.

(LO 2)

The accounting records of Connor Electronics, Ltd. show the following data.

|  |  |
| --- | --- |
| Beginning inventory | 3,000 units at £5 |
| Purchases | 8,000 units at £7 |
| Sales | 9,400 units at £10 |

Determine cost of goods sold during the period under a periodic inventory system using (a) the FIFO method and (b) the average-cost method. (Round unit cost to nearest tenth of a cent.)

**DO IT! 6-3.** *Compute inventory value under LCNRV*.

(LO 4)

(a) Guo Company, Ltd. sells three different categories of tools (small, medium, and large). The cost and net realizable value of its inventory of tools are as follows.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Cost** |  | **Net Realizable Value** |
| Small | HK$ 640,000 |  | HK$ 730,000 |
| Medium | 2,900,000 |  | 2,600,000 |
| Large | 1,520,000 |  | 1,475,000 |

Determine the value of the company's inventory under the lower-of-cost-or-net realizable value approach.

(b) Sun Company, Ltd. understated its 2016 ending inventory by HK$284,000. Determine the impact this error has on ending inventory, cost of goods sold, and equity in 2016 and 2017.

**DO IT! 6-4.** *Compute inventory turnover ratio and assess inventory level*.

(LO 6)

Early in 2017, Lausanne Company AG switched to a just-in-time inventory system. Its sales, cost of goods sold, and inventory amounts for 2016 and 2017 are shown below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2016** |  | **2017** |
| Sales | CHF3,120,000 |  | CHF3,713,000 |
| Cost of goods sold | 1,200,000 |  | 1,425,000 |
| Beginning inventory | 180,000 |  | 220,000 |
| Ending inventory | 220,000 |  | 100,000 |

Determine the inventory turnover and days in inventory for 2016 and 2017. Discuss the changes in the amount of inventory, the inventory turnover and days in inventory, and the amount of sales across the two years.

EXERCISES

**E6-1.** *Determine the correct inventory amount*.

(LO 1)

Premier Bank and Trust is considering giving Alou Company a loan. Before doing so, management decides that further discussions with Alou's accountant may be desirable. One area of particular concern is the inventory account, which has a year-end balance of £297,000. Discussions with the accountant reveal the following.

1. Alou sold goods costing £38,000 to Comerico Company, FOB shipping point, on December 28. The goods are not expected to arrive at Comerico until January 12. The goods were not included in the physical inventory because they were not in the warehouse.

2. The physical count of the inventory did not include goods costing £91,000 that were shipped to Alou FOB destination on December 27 and were still in transit at year-end.

3. Alou received goods costing £25,000 on January 2. The goods were shipped FOB shipping point on December 26 by Grant Co. The goods were not included in the physical count.

4. Alou sold goods costing £35,000 to Emerick Co., FOB destination, on December 30. The goods were received at Emerick on January 8. They were not included in Alou's physical inventory.

5. Alou received goods costing £44,000 on January 2 that were shipped FOB shipping point on December 29. The shipment was a rush order that was supposed to arrive December 31. This purchase was included in the ending inventory of £297,000.

***Instructions***

Determine the correct inventory amount on December 31.

**E6-2.** *Determine the correct inventory amount*.

(LO 1)

Kale Wilson, an auditor with Sneed Chartered Accountants, is performing a review of Platinum Company's inventory account. Platinum did not have a good year, and top management is under pressure to boost reported income. According to its records, the inventory balance at year-end was £740,000. However, the following information was not considered when determining that amount.

1. Included in the company's count were goods with a cost of £250,000 that the company is holding on consignment. The goods belong to Superior, Ltd.

2. The physical count did not include goods purchased by Platinum with a cost of £40,000 that were shipped FOB destination on December 28 and did not arrive at Platinum's warehouse until January 3.

3. Included in the inventory account was £17,000 of office supplies that were stored in the warehouse and were to be used by the company's supervisors and managers during the coming year.

4. The company received an order on December 29 that was boxed and sitting on the loading dock awaiting pick-up on December 31. The shipper picked up the goods on January 1 and delivered them on January 6. The shipping terms were FOB shipping point. The goods had a selling price of £49,000 and a cost of £33,000. The goods were not included in the count because they were sitting on the dock.

5. Included in the count was £48,000 of goods that were parts for a machine that the company no longer made. Given the high-tech nature of Platinum's products, it was unlikely that these obsolete parts had any other use. However, management would prefer to keep them on the books at cost, “since that is what we paid for them, after all.”

***Instructions***

Prepare a schedule to determine the correct inventory amount. Provide explanations for each item above, saying why you did or did not make an adjustment for each item.

**E6-3.** *Calculate cost of goods sold using specific identification and FIFO*.

(LO 2, 3)

On December 1, Discount Electronics Ltd. has three DVD players left in stock. All are identical, all are priced to sell at NT$4,500. One of the three DVD players left in stock, with serial #1012, was purchased on June 1 at a cost of NT$3,000. Another, with serial #1045, was purchased on November 1 for NT$2,760. The last player, serial #1056, was purchased on November 30 for NT$2,520.

***Instructions***

(a) Calculate the cost of goods sold using the FIFO periodic inventory method assuming that two of the three players were sold by the end of December, Discount Electronics' year-end.

(b) If Discount Electronics used the specific identification method instead of the FIFO method, how might it alter its earnings by “selectively choosing” which particular players to sell to the two customers? What would Discount's cost of goods sold be if the company wished to minimize earnings? Maximize earnings?

(c) Which of the two inventory methods do you recommend that Discount use? Explain why.

**E6-4.** *Compute inventory and cost of goods sold using FIFO and average-cost*.

(LO 2)

Zhu Boards sells a snowboard, Xpert, that is popular with snowboard enthusiasts. Information relating to Zhu's purchases of Xpert snowboards during September is shown below. During the same month, 121 Xpert snowboards were sold. Zhu's uses a periodic inventory system.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Explanation** |  | **Units** |  | **Unit Cost** |  | **Total Cost** |
| Sept. 1 |  | Inventory |  | 23 |  | HK$970 |  | HK$22,310 |
| Sept. 12 |  | Purchases |  | 45 |  | 1,020 |  | 45,900 |
| Sept. 19 |  | Purchases |  | 20 |  | 1,040 |  | 20,800 |
| Sept. 26 |  | Purchases |  | 44 |  | 1,050 |  | 46,200 |
|  |  | Totals |  | 132 |  |  |  | HK$135,210 |

***Instructions***

(a) Compute the ending inventory at September 30 and cost of goods sold using the FIFO and average-cost methods. Prove the amount allocated to cost of goods sold under each method.

(b) For both FIFO and average-cost, calculate the sum of ending inventory and cost of goods sold. What do you notice about the answers you found for each method?

**E6-5.** *Compute inventory and cost of goods sold using FIFO and average-cost*.

(LO 2)

Zambian Co. uses a periodic inventory system. Its records show the following for the month of May, in which 68 units were sold.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **Units** | | |  | **Unit Cost** |  | **Total Cost** | | | |
| May1 |  | Inventory |  | 30 | | |  | €9 |  | €270 | | | |
| 15 |  | Purchases |  | 22 | | |  | 11 |  | 242 | | | |
| 24 |  | Purchases |  | 38 | | |  | 12 |  | 456 | | | |
|  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | Totals |  | 90 | | |  |  |  | €968 | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |

***Instructions***

Compute the ending inventory at May 31 and cost of goods sold using the FIFO and average-cost methods. Prove the amount allocated to cost of goods sold under each method.

**E6-6.** *Compute inventory and cost of goods sold using FIFO and average-cost*.

(LO 2, 3)

Howsham Company, Ltd. reports the following for the month of June.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **Units** |  | **Unit Cost** |  | **Total Cost** |
| June 1 |  | Inventory |  | 200 |  | £5 |  | £1,000 |
| 12 |  | Purchase |  | 300 |  | 6 |  | 1,800 |
| 23 |  | Purchase |  | 500 |  | 7 |  | 3,500 |
| 30 |  | Inventory |  | 160 |  |  |  |  |

***Instructions***

(a) Compute the cost of the ending inventory and the cost of goods sold under (1) FIFO and (2) average-cost.

(b) Which costing method gives the higher ending inventory? Why?

(c) Which method results in the higher cost of goods sold? Why?

**E6-7.** *Compute inventory under FIFO and average-cost*.

(LO 2, 3)

Thaam Company, Ltd. had 100 units in beginning inventory at a total cost of NT$300,000. The company purchased 200 units at a total cost of NT$680,000. At the end of the year, Givens had 75 units in ending inventory.

***Instructions***

(a) Compute the cost of the ending inventory and the cost of goods sold under (1) FIFO and (2) average-cost.

(b) Which cost flow method would result in the higher net income?

(c) Which cost flow method would result in inventories approximating current cost in the statement of financial position?

(d) Which cost flow method would result in Thaam paying fewer taxes in the first year?

**E6-8.** *Determine ending inventory under LCNRV*.

(LO 4)

Kinshasa Camera Shop uses the lower-of-cost-or-net realizable value basis for its inventory. The following data are available at December 31.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Item** |  | **Units** |  | **Unit Cost** |  | **Net Realizable Value** |
| Cameras: |  |  |  |  |  |  |
| Minolta |  | 8 |  | ₩170,000 |  | ₩156,000 |
| Canon |  | 6 |  | 150,000 |  | 152,000 |
| Light meters: |  |  |  |  |  |  |
| Vivitar |  | 12 |  | 125,000 |  | 115,000 |
| Kodak |  | 14 |  | 115,000 |  | 135,000 |

***Instructions***

Determine the amount of the ending inventory by applying the lower-of-cost-or-net realizable value basis.

**E6-9.** *Compute lower-of-cost-or-net realizable value*.

(LO 4)

Banovic Company OAO applied FIFO to its inventory and got the following results for its ending inventory.

|  |  |
| --- | --- |
| Tennis shoes | 100 units at a cost per unit of €68 |
| Running shoes | 150 units at a cost per unit of €75 |
| Basketball shoes | 125 units at a cost per unit of €80 |

The net realizable value per unit at year-end was tennis shoes €70, running shoes €71, and basketball shoes €74.

***Instructions***

Determine the amount of ending inventory at lower-of-cost-or-net realizable value.

**E6-10.** *Determine effects of inventory errors*.

(LO 5)

Bamburgh Hardware reported cost of goods sold as follows.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2016** |  | **2017** |
| Beginning inventory | €20,000 |  | €30,000 |
| Cost of goods purchased | 150,000 |  | 175,000 |
| Cost of goods available for sale | 170,000 |  | 205,000 |
| Ending inventory | 30,000 |  | 35,000 |
| Cost of goods sold | €140,000 |  | €170,000 |

Bamburgh made two errors: (1) 2016 ending inventory was overstated €2,000, and (2) 2017 ending inventory was understated €6,000.

***Instructions***

Compute the correct cost of goods sold for each year.

**E6-11.** *Prepare correct income statements*.

(LO 5)

Wu Watch Company, Ltd. reported the following income statement data for a 2-year period.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2016** |  | **2017** |
| Sales revenue | HK$2,100,000 |  | HK$2,500,000 |
| Cost of goods sold |  |  |  |
| Beginning inventory | 320,000 |  | 440,000 |
| Cost of goods purchased | 1,730,000 |  | 2,040,000 |
| Cost of goods available for sale | 2,050,000 |  | 2,480,000 |
| Ending inventory | 440,000 |  | 520,000 |
| Cost of goods sold | 1,610,000 |  | 1,960,000 |
| Gross profit | HK$ 490,000 |  | HK$ 540,000 |

Wu uses a periodic inventory system. The inventories at January 1, 2016, and December 31, 2017, are correct. However, the ending inventory at December 31, 2016, was understated HK$60,000.

***Instructions***

(a) Prepare correct income statement data for the 2 years.

(b) What is the cumulative effect of the inventory error on total gross profit for the 2 years?

(c) Explain in a letter to the president of Wu Watch Company, Ltd. what has happened, i.e., the nature of the error and its effect on the financial statements.

**E6-12.** *Compute inventory turnover, days in inventory, and gross profit rate*.

(LO 6)

This information is available for Sepia Photo, Ltd. Corporation for 2015, 2016, and 2017.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **2015** |  | **2016** |  | **2017** |
| Beginning inventory | £ 100,000 |  | £ 330,000 |  | £ 400,000 |
| Ending inventory | 330,000 |  | 400,000 |  | 480,000 |
| Cost of goods sold | 900,000 |  | 1,120,000 |  | 1,300,000 |
| Sales revenue | 1,200,000 |  | 1,600,000 |  | 1,900,000 |

***Instructions***

Calculate inventory turnover, days in inventory, and gross profit rate (from Chapter 5) for Sepia Photo Corporation for 2015, 2016, and 2017. Comment on any trends.

**E6-13.** *Compute inventory turnover and days in inventory*.

(LO 6)

The cost of goods sold computations for Gouda Company NV and Edam Company NV are shown below.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Gouda Company** | | | | | |  | **Edam Company** | | | | | |
| Beginning inventory | €47,000 | | | | | |  | €71,000 | | | | | |
| Cost of goods purchased | 200,000 | | | | | |  | 290,000 | | | | | |
|  |  | | |  | |  |  |  | | |  | |  |
| Cost of goods available for sale | 247,000 | | | | | |  | 361,000 | | | | | |
| Ending inventory | 58,000 | | | | | |  | 69,000 | | | | | |
|  |  |  | | | |  |  |  |  | | |  | |
| Cost of goods sold | €189,000 | | | | | |  | €292,000 | | | | | |
|  |  | |  | |  | |  |  | |  | |  | |

***Instructions***

(a) Compute inventory turnover and days in inventory for each company.

(b) Which company moves its inventory more quickly?

**\*E6-14.** *Apply cost flow methods to perpetual records*.

(LO 7)

Roselle Appliance SA uses a perpetual inventory system. For its flat-screen television sets, the January 1 inventory was 3 sets at €600 each. On January 10, Roselle purchased 6 units at €648 each. The company sold 2 units on January 8 and 4 units on January 15.

***Instructions***

Compute the ending inventory under (1) FIFO and (2) moving-average cost. (Round the unit cost to the nearest cent.)

**\*E6-15.** *Calculate inventory and cost of goods sold using two cost flow methods in a perpetual inventory system*.

(LO 7)

Howsham Company, Ltd. reports the following for the month of June.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Explanation** |  | **Units** |  | **Unit Cost** |  | **Total Cost** |
| June1 |  | Inventory |  | 200 |  | £5 |  | £1,000 |
| 12 |  | Purchase |  | 300 |  | 6 |  | 1,800 |
| 23 |  | Purchase |  | 500 |  | 7 |  | 3,500 |
| 30 |  | Inventory |  | 160 |  |  |  |  |

***Instructions***

(a) Calculate the cost of the ending inventory and the cost of goods sold for (1) FIFO and (2) moving-average cost, using a perpetual inventory system. Assume a sale of 400 units occurred on June 15 for a selling price of £8 and a sale of 440 units on June 27 for £9.

(b) How do the results differ from E6-6?

(c) Why is the average unit cost not £6 [(£5 + £6 + £7) ÷ 3 = £6]?

**\*E6-16.** *Apply cost flow methods to perpetual records*.

(LO 7)

Information about Zhu Boards is presented in E6-4. Additional data regarding Zhu's sales of Xpert snowboards are provided below. Assume that Zhu uses a perpetual inventory system.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Explanation** |  | **Units** | | |  | **Unit Price** |  | **Total Revenue** | | |
| Sept.5 |  | Sale |  | 12 | | |  | HK$1,990 |  | HK$23,880 | | |
| Sept. 16 |  | Sale |  | 50 | | |  | 2,030 |  | 101,500 | | |
| Sept. 29 |  | Sale |  | 59 | | |  | 2,090 |  | 123,310 | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Totals |  | 121 | | |  |  |  | HK$248,690 | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

***Instructions***

(a) Compute ending inventory at September 30 using FIFO and moving-average cost.

(b) Compare ending inventory using a perpetual inventory system to ending inventory using a periodic inventory system (from E6-4).

(c) Which inventory cost flow method (FIFO, moving-average cost) gives the same ending inventory value under both periodic and perpetual? Which method gives different ending inventory values?

**\*E6-17.** *Use the gross profit method to estimate inventory*.

(LO 8)

Punjab Company, Ltd. reported the following information for November and December 2017.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **November** |  | **December** |
| Cost of goods purchased | Rs5,000,000 |  | Rs6,100,000 |
| Inventory, beginning-of-month | 1,000,000 |  | 1,200,000 |
| Inventory, end-of-month | 1,200,000 |  | ? |
| Sales revenue | 7,500,000 |  | 10,000,000 |

Punjab's ending inventory at December 31 was destroyed in a fire.

***Instructions***

(a) Compute the gross profit rate for November.

(b) Using the gross profit rate for November, determine the estimated cost of inventory lost in the fire.

**\*E6-18.** *Determine merchandise lost using the gross profit method of estimating inventory*.

(LO 8)

The inventory of Ipswich Company Ltd. was destroyed by fire on March 1. From an examination of the accounting records, the following data for the first 2 months of the year are obtained: Sales Revenue £51,000, Sales Returns and Allowances £1,000, Purchases £31,200, Freight-In £1,200, and Purchase Returns and Allowances £1,800.

***Instructions***

Determine the merchandise lost by fire, assuming:

(a) A beginning inventory of £20,000 and a gross profit rate of 40% on net sales.

(b) A beginning inventory of £30,000 and a gross profit rate of 32% on net sales.

**\*E6-19.** *Determine ending inventory at cost using retail method*.

(LO 8)

Zapato, SLU uses the retail inventory method for its two departments, Women's Shoes and Men's Shoes. The following information for each department is obtained.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** |  | **Women's Shoes** |  | **Men's Shoes** |
| Beginning inventory at cost |  | €36,500 |  | €45,000 |
| Cost of goods purchased at cost |  | 150,000 |  | 136,300 |
| Net sales |  | 178,000 |  | 185,000 |
| Beginning inventory at retail |  | 46,000 |  | 60,000 |
| Cost of goods purchased at retail |  | 187,000 |  | 185,000 |

***Instructions***

Compute the estimated cost of the ending inventory for each department under the retail inventory method.

**\*E6-20.** *Apply the LIFO cost method (periodic)*.

(LO 9)

Using the data in E6-6, compute the cost of the ending inventory and the cost of goods sold using LIFO periodic.

**\*E6-21.** *Apply the LIFO cost method (periodic)*.

(LO 9)

(a) Using the data in E6-7, compute the cost of the ending inventory and cost of goods sold using LIFO periodic. In addition, answer instructions (b), (c), and (d) from E6-7 as it relates to the three cost flow methods.

PROBLEMS: SET A AND PROBLEMS: SET B

**P6-1A** *Determine items and amounts to be recorded in inventory*.

(LO 1)

Anatolia Limited is trying to determine the value of its ending inventory at February 28, 2017, the company's year-end. The accountant counted everything that was in the warehouse as of February 28, which resulted in an ending inventory valuation of [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)48,000. However, she didn't know how to treat the following transactions so she didn't record them.

(a) On February 26, Anatolia shipped to a customer goods costing [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)800. The goods were shipped FOB shipping point, and the receiving report indicates that the customer received the goods on March 2.

(b) On February 26, Shira Inc. shipped goods to Anatolia FOB destination. The invoice price was [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)350. The receiving report indicates that the goods were received by Anatolia on March 2.

(c) Anatolia had [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)620 of inventory at a customer's warehouse “on approval.” The customer was going to let Anatolia know whether it wanted the merchandise by the end of the week, March 4.

(d) Anatolia also had [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)400 of inventory on consignment at a Palletine craft shop.

(e) On February 26, Anatolia ordered goods costing [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)780. The goods were shipped FOB shipping point on February 27. Anatolia received the goods on March 1.

(f) On February 28, Anatolia packaged goods and had them ready for shipping to a customer FOB destination. The invoice price was [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)350; the cost of the items was [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)220. The receiving report indicates that the goods were received by the customer on March 2.

(g) Anatolia had damaged goods set aside in the warehouse because they are no longer saleable. These goods cost [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)400 and Anatolia originally expected to sell these items for [Turkish lira symbol black.svg](http://zh.wikipedia.org/wiki/%E5%9C%9F%E8%80%B3%E5%85%B6%E9%87%8C%E6%8B%89%E7%AC%A6%E5%8F%B7)600.

***Instructions***

For each of the above transactions, specify whether the item in question should be included in ending inventory and, if so, at what amount. For each item that is not included in ending inventory, indicate who owns it and what account, if any, it should have been recorded in.

**P6-2A** *Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis*.

(LO 2, 3)

Dyna Distribution, Ltd. markets CDs of the performing artist King James. At the beginning of March, Dyna had in beginning inventory 1,500 King James CDs with a unit cost of €7. During March, Dyna made the following purchases of King James CDs.

|  |  |  |
| --- | --- | --- |
| March 5 3,500 @ €8 |  | March 21 2,000 @ €10 |
| March 13 4,000 @ €9 |  | March 26 2,000 @ €11 |

During March, 10,000 units were sold. Dyna uses a periodic inventory system.

***Instructions***

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(2) Cost of goods sold:

FIFO €84,500

Average €89,615

(c) Which cost flow method results in (1) the higher inventory amount for the statement of financial position and (2) the higher cost of goods sold for the income statement?

**P6-3A** *Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis*.

(LO 2, 3)

Marlow Company, Ltd. had a beginning inventory of 400 units of Product Kimbo at a cost of £8 per unit. During the year, purchases were:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Feb. 20 |  | 200 units at £9 |  | Aug. 12 |  | 600 units at £11 |
| May 5 |  | 500 units at £10 |  | Dec. 8 |  | 300 units at £12 |

Marlow Company uses a periodic inventory system. Sales totaled 1,500 units.

***Instructions***

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

Cost of goods sold:

FIFO £14,400

Average £15,150

(c) Which cost flow method results in (1) the lower inventory amount for the statement of financial position, and (2) the lower cost of goods sold for the income statement?

**P6-4A** *Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost*.

(LO 2, 3)

The management of Gisel Co., SA is reevaluating the appropriateness of using its present inventory cost flow method. They request your help in determining the results of operations for 2017 if either the FIFO method or the average-cost method had been used. For 2017, the accounting records show the following data.

|  |  |  |
| --- | --- | --- |
| **Inventories** |  | **Purchases and Sales** |
| Beginning (10,000 units) €22,800 |  | Total net sales (225,000 units) €865,000 |
| Ending (15,000 units) |  | Total cost of goods purchased |
|  |  | (230,000 units) 578,500 |

Purchases were made quarterly as follows.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Quarter** |  | **Units** |  | **Unit Cost** |  | **Total Cost** |
| 1 |  | 60,000 |  | €2.30 |  | €138,000 |
| 2 |  | 50,000 |  | 2.50 |  | 125,000 |
| 3 |  | 50,000 |  | 2.60 |  | 130,000 |
| 4 |  | 70,000 |  | 2.65 |  | 185,500 |
|  |  | 230,000 |  |  |  | €578,500 |

Operating expenses were €147,000, and the company's income tax rate is 32%.

***Instructions***

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

Net income:

FIFO €106,386

Average €104,907

(b) Answer the following questions for management.

1. Which cost flow method (FIFO or average-cost) produces the more meaningful inventory amount for the statement of financial position? Why?

2. Which cost flow method (FIFO or average-cost) is more likely to approximate actual physical flow of the goods? Why?

3. How much additional cash will be available for management under average-cost than under FIFO? Why?

(3) €696

**P6-5A** *Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results*.

(LO 2, 3)

You are provided with the following information for Senta Ltd. for the month ended October 31, 2017. Senta uses a periodic method for inventory.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Description** |  | **Units** |  | **Unit Cost or Selling Price** |
| October1 |  | Beginning inventory |  | 60 |  | €24 |
| October9 |  | Purchase |  | 120 |  | 26 |
| October 11 |  | Sale |  | 100 |  | 35 |
| October 17 |  | Purchase |  | 70 |  | 27 |
| October 22 |  | Sale |  | 65 |  | 40 |
| October 25 |  | Purchase |  | 80 |  | 28 |
| October 29 |  | Sale |  | 120 |  | 40 |

***Instructions***

(a) Calculate (i) ending inventory, (ii) cost of goods sold, (iii) gross profit, and (iv) gross profit rate under each of the following methods.

1. FIFO.

2. Average-cost.

(iii) Gross profit:

FIFO €3,470

Average €3,395

(b) Compare results for the two cost flow assumptions.

**P6-6A** *Compare specific identification, FIFO and average-cost under periodic method; use cost flow assumption to influence earnings*.

(LO 2, 3)

You have the following information for Greco Diamonds SLU. Greco Diamonds uses the periodic method of accounting for its inventory transactions. Greco only carries one brand and size of diamonds—all are identical. Each batch of diamonds purchased is carefully coded and marked with its purchase cost.

March1 Beginning inventory 150 diamonds at a cost of €310 per diamond.

March3 Purchased 200 diamonds at a cost of €350 each.

March5 Sold 180 diamonds for €600 each.

March 10 Purchased 350 diamonds at a cost of $380 each.

March 25 Sold 400 diamonds for €650 each.

***Instructions***

(a) Assume that Greco Diamonds uses the specific identification cost flow method.

1. Demonstrate how Greco Diamonds could maximize its gross profit for the month by specifically selecting which diamonds to sell on March 5 and March 25.

2. Demonstrate how Greco Diamonds could minimize its gross profit for the month by selecting which diamonds to sell on March 5 and March 25.

Gross profit:

1. Maximum €164,100

2. Minimum €155,700

(b) Assume that Greco Diamonds uses the FIFO cost flow assumption. Calculate cost of goods sold. How much gross profit would Greco Diamonds report under this cost flow assumption?

(c) Assume that Greco Diamonds uses the average-cost cost flow assumption. Calculate cost of goods sold. How much gross profit would the company report under this cost flow assumption?

(d) Which cost flow method should Greco Diamonds select? Explain.

**P6-7A** *Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost*.

(LO 2, 3)

The management of Tudor Ltd. asks your help in determining the comparative effects of the FIFO and average-cost inventory cost flow methods. For 2017, the accounting records provide the data shown below.

|  |  |
| --- | --- |
| Inventory, January 1 (10,000 units) | £35,000 |
| Cost of 120,000 units purchased | 501,000 |
| Selling price of 105,000 units sold | 695,000 |
| Operating expenses | 130,000 |

Units purchased consisted of 40,000 units at £4.00 on May 10; 60,000 units at £4.20 on August 15; and 20,000 units at £4.45 on November 20. Income taxes are 28%.

***Instructions***

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

Gross profit:

FIFO £269,000

Average £262,075

(b) Answer the following questions for management in the form of a business letter.

1. Which inventory cost flow method produces the more meaningful inventory amount for the statement of financial position? Why?

2. Which inventory cost flow method is more likely to approximate the actual physical flow of the goods? Why?

3. How much more cash will be available for management under average-cost than under FIFO? Why?

**\*P6-8A** *Calculate cost of goods sold and ending inventory for FIFO and moving-average cost under the perpetual system; compare gross profit under each assumption*.

(LO 7)

Tempo Ltd. is a retailer operating in Dartmouth, Nova Scotia. Tempo uses the perpetual inventory method. All sales returns from customers result in the goods being returned to inventory; the inventory is not damaged. Assume that there are no credit transactions; all amounts are settled in cash. You are provided with the following information for Tempo Ltd. for the month of January 2017.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Description** |  | **Quantity** |  | **Unit Cost or Selling Price** |
| December 31 |  | Ending inventory |  | 150 |  | £19 |
| January 2 |  | Purchase |  | 100 |  | 21 |
| January 6 |  | Sale |  | 150 |  | 40 |
| January 9 |  | Sale return |  | 10 |  | 40 |
| January 9 |  | Purchase |  | 75 |  | 24 |
| January 10 |  | Purchase return |  | 15 |  | 24 |
| January 10 |  | Sale |  | 50 |  | 45 |
| January 23 |  | Purchase |  | 100 |  | 26 |
| January 30 |  | Sale |  | 160 |  | 50 |

***Instructions***

(a) For each of the following cost flow assumptions, calculate (i) cost of goods sold, (ii) ending inventory, and (iii) gross profit.

1. FIFO.

2. Moving-average cost.

(iii) Gross profit:

FIFO £8,420

Average £8,266

(b) Compare results for the two cost flow assumptions.

**\*P6-9A** *Determine ending inventory under a perpetual inventory system*.

(LO 7)

Dominican Appliance Mart began operations on May 1. It uses a perpetual inventory system. During May, the company had the following purchases and sales for its Model 25 Sureshot camera.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Purchases** | | |  |  |
| **Date** |  | **Units** |  | **Unit Cost** |  | **Sales Units** |
| May1 |  | 7 |  | NT$4,600 |  |  |
| 4 |  |  |  |  |  | 4 |
| 8 |  | 8 |  | NT$5,100 |  |  |
| 12 |  |  |  |  |  | 5 |
| 15 |  | 6 |  | NT$5,520 |  |  |
| 20 |  |  |  |  |  | 3 |
| 25 |  |  |  |  |  | 5 |

***Instructions***

(a) Determine the ending inventory under a perpetual inventory system using (1) FIFO and (2) moving-average cost.

FIFO NT$22,080

Average NT$20,967

(b) Which costing method produces (1) the higher ending inventory valuation and (2) the lower ending inventory valuation?

**\*P6-10A** *Estimate inventory loss using gross profit method*.

(LO 8)

Lisbon Company SA lost 70% of its inventory in a fire on March 25, 2017. The accounting records showed the following gross profit data for February and March.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **February** |  | **March (to 3/25)** |
| Net sales | €300,000 |  | €260,000 |
| Net purchases | 197,800 |  | 191000 |
| Freight-in | 2,900 |  | 4,000 |
| Beginning inventory | 4,500 |  | 25,200 |
| Ending inventory | 25,200 |  | ? |

Lisbon Company is fully insured for fire losses but must prepare a report for the insurance company.

***Instructions***

(a) Compute the gross profit rate for the month of February.

40%

(b) Using the gross profit rate for February, determine both the estimated total inventory and inventory lost in the fire in March.

**\*P6-11A** *Compute ending inventory using retail method.*

(LO 8)

Terzi Department Store SA uses the retail inventory method to estimate its monthly ending inventories. The following information is available for two of its departments at August 31, 2017.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sporting Goods** | | |  | **Jewelry and Cosmetics** | | |
|  | **Cost** |  | **Retail** |  | **Cost** |  | **Retail** |
| Net sales |  |  | €1,010,000 |  |  |  | €1,150,000 |
| Purchases | €675,000 |  | 1,066,000 |  | €639,000 |  | 1,158,000 |
| Purchase returns | (26,000) |  | (40,000) |  | (10,000) |  | (20,000) |
| Purchase discounts | (12,360) |  | — |  | (8,860) |  | — |
| Freight-in | 9,000 |  | — |  | 7,000 |  | — |
| Beginning inventory | 47,360 |  | 74,000 |  | 32,860 |  | 62,000 |

At December 31, Terzi Department Store takes a physical inventory at retail. The actual retail values of the inventories in each department are Sporting Goods €85,000, and Jewelry and Cosmetics €52,000.

***Instructions***

(a) Determine the estimated cost of the ending inventory for each department on August 31, 2017, using the retail inventory method.

Sporting Goods €56,700

(b) Compute the ending inventory at cost for each department at December 31, assuming the cost-to-retail ratios are 60% for Sporting Goods and 54% for Jewelry and Cosmetics.

**\*P6-12A** *Apply the LIFO cost method (periodic)*.

(LO 9)

Using the data in P6-5A, compute the cost of the ending inventory using the LIFO cost flow assumption. Assume that Senta Ltd. uses the periodic inventory system.

**Problems: Set B**

**P6-1B** *Determine items and amounts to be recorded in inventory*.

(LO 1)

Banff Limited is trying to determine the value of its ending inventory as of February 28, 2017, the company's year-end. The following transactions occurred, and the accountant asked your help in determining whether they should be recorded or not.

(a) On February 26, Banff shipped goods costing £800 to a customer and charged the customer £1,000. The goods were shipped with terms FOB shipping point and the receiving report indicates that the customer received the goods on March 2.

(b) On February 26, Vendor Inc. shipped goods to Banff under terms FOB shipping point. The invoice price was £450 plus £30 for freight. The receiving report indicates that the goods were received by Banff on March 2.

(c) Banff had £860 of inventory isolated in the warehouse. The inventory is designated for a customer who has requested that the goods be shipped on March 10.

(d) Also included in Banff's warehouse is £700 of inventory that Jasper Producers shipped to Banff on consignment.

(e) On February 26, Banff issued a purchase order to acquire goods costing £900. The goods were shipped with terms FOB destination on February 27. Banff received the goods on March 2.

(f) On February 26, Banff shipped goods to a customer under terms FOB destination. The invoice price was £350; the cost of the items was £200. The receiving report indicates that the goods were received by the customer on February 28.

***Instructions***

For each of the above transactions, specify whether the item in question should be included in ending inventory, and if so, at what amount.

**P6-2B** *Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis*.

(LO 2, 3)

Doom's Day Distribution markets CDs of the performing artist Marilynn. At the beginning of October, Doom's Day had in beginning inventory 2,000 of Marilynn's CDs with a unit cost of £7. During October, Doom's Day made the following purchases of Marilynn's CDs.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Oct. 3 |  | 3,000 @ £8 |  | Oct. 19 |  | 4,000 @ £10 |
| Oct. 9 |  | 5,500 @ £9 |  | Oct. 25 |  | 2,000 @ £11 |

During October, 13,500 units were sold. Doom's Day uses a periodic inventory system.

***Instructions***

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(2) Cost of goods sold:

FIFO £117,500

Average £122,318

(c) Which cost flow method results in (1) the higher inventory amount for the statement of financial position and (2) the higher cost of goods sold for the income statement?

**P6-3B** *Determine cost of goods sold and ending inventory, using FIFO and average-cost with analysis*.

(LO 2 ,3)

Kam Company Ltd. had a beginning inventory on January 1 of 100 units of Product 4-18-15 at a cost of HK$210 per unit. During the year, the following purchases were made.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Mar. 15 |  | 300 units at HK$240 |  | Sept. 4 |  | 300 units at HK$270 |
| July 20 |  | 200 units at HK$250 |  | Dec. 2 |  | 100 units at HK$290 |

700 units were sold. Kam Company uses a periodic inventory system.

***Instructions***

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory, and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(2) Cost of goods sold:

FIFO HK$170,000

Average HK$177,100

(c) Which cost flow method results in (1) the higher inventory amount for the statement of financial position, and (2) the higher cost of goods sold for the income statement?

**P6-4B** *Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost*.

(LO 2, 3)

The management of Munich Company SE is reevaluating the appropriateness of using its present inventory cost flow method. The company requests your help in determining the results of operations for 2017 if either the FIFO or the average-cost method had been used. For 2017, the accounting records show these data:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Inventories** | | |  | **Purchases and Sales** | | |
| Beginning (8,000 units) |  | €16,000 |  | Total net sales (188,000 units) |  | €780,000 |
| Ending (15,000 units) |  |  |  | Total cost of goods purchased |  |  |
|  |  |  |  | (195,000 units) |  | 480,500 |

Purchases were made quarterly as follows.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Quarter** |  | **Units** |  | **Unit Cost** |  | **Total Cost** |
| 1 |  | 50,000 |  | €2.20 |  | €110,000 |
| 2 |  | 40,000 |  | 2.40 |  | 96,000 |
| 3 |  | 45,000 |  | 2.50 |  | 112,500 |
| 4 |  | 60,000 |  | 2.70 |  | 162,000 |
|  |  | 195,000 |  |  |  | €480,500 |

Operating expenses were €130,000, and the company's income tax rate is 36%.

***Instructions***

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

Gross profit:

FIFO €324,000

Average €320,190

(b) Answer the following questions for management.

1. Which cost flow method (FIFO or average-cost) produces the more meaningful inventory amount for the statement of financial position? Why?

2. Which cost flow method (FIFO or average-cost) is more likely to approximate the actual physical flow of goods? Why?

3. How much more cash will be available for management under average-cost than under FIFO? Why?

**P6-5B** *Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results*.

(LO 2, 3)

You are provided with the following information for Lahti Ltd. for the month ended June 30, 2017. Lahti uses the periodic method for inventory.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Description** |  | **Quantity** |  | **Unit Cost or Selling Price** |
| June1 |  | Beginning inventory |  | 40 |  | £40 |
| June4 |  | Purchase |  | 135 |  | 43 |
| June 10 |  | Sale |  | 110 |  | 70 |
| June 11 |  | Sale return |  | 15 |  | 70 |
| June 18 |  | Purchase |  | 55 |  | 46 |
| June 18 |  | Purchase return |  | 10 |  | 46 |
| June 25 |  | Sale |  | 60 |  | 75 |
| June 28 |  | Purchase |  | 30 |  | 50 |

***Instructions***

(a) Calculate (i) ending inventory, (ii) cost of goods sold, (iii) gross profit, and (iv) gross profit rate of the two following methods.

1. FIFO.

2. Average-cost.

(iii) Gross profit:

FIFO £4,605

Average £4,345.50

(b) Compare results for the two cost flow assumptions.

**P6-6B** *Compare specific identification, FIFO, and average-cost under periodic method; use cost flow assumption to justify price increase*.

(LO 2, 3)

You are provided with the following information for Petro Pushers. Petro Pushers uses the periodic method of accounting for its inventory transactions.

March 1 Beginning inventory 2,200 liters at a cost of £0.60 per liter.

March 3 Purchased 2,500 liters at a cost of £0.65 per liter.

March 5 Sold 2,200 liters for £1.05 per liter.

March 10 Purchased 4,000 liters at a cost of £0.72 per liter.

March 20 Purchased 2,500 liters at a cost of £0.80 per liter.

March 30 Sold 5,500 liters for £1.25 per liter.

***Instructions***

(a) Prepare partial income statements through gross profit, and calculate the value of ending inventory that would be reported on the statement of financial position, under each of the following cost flow assumptions. (Round ending inventory and cost of goods sold to the nearest dollar.)

1. Specific identification method assuming:

(i) The March 5 sale consisted of 1,100 liters from the March 1 beginning inventory and 1,100 liters from the March 3 purchase; and

(ii) The March 30 sale consisted of the following number of units sold from beginning inventory and each purchase: 450 liters from March 1; 850 liters from March 3; 2,900 liters from March 10; 1,300 liters from March 20.

2. FIFO.

3. Average-cost.

(1) Gross profit:

Specific identification £3,860

(2) FIFO £4,080

(3) Average £3,810

(b) How can companies use a cost flow method to justify price increases? Which cost flow method would best support an argument to increase prices?

**P6-7B** *Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost*.

(LO 2, 3)

The management of Aar Co. SA asks your help in determining the comparative effects of the FIFO and average-cost inventory cost flow methods. For 2017, the accounting records provide the data shown below.

|  |  |
| --- | --- |
| Inventory, January 1 (10,000 units) | CHF47,000 |
| Cost of 100,000 units purchased | 532,000 |
| Selling price of 85,000 units sold | 750,000 |
| Operating expenses | 160,000 |

Units purchased consisted of 35,000 units at CHF5.10 on May 10; 35,000 units at CHF5.30 on August 15; and 30,000 units at CHF5.60 on November 20. Income taxes are 30%.

***Instructions***

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

Net income:

FIFO CHF105,700

Average CHF99,820

(b) Answer the following questions for management.

1. Which inventory cost flow method produces the more meaningful inventory amount for the statement of financial position? Why?

2. Which inventory cost flow method is more likely to approximate actual physical flow of the goods? Why?

3. How much additional cash will be available for management under average-cost than under FIFO? Why?

**\*P6-8B** *Calculate cost of goods sold and ending inventory under FIFO and moving-average cost under the perpetual system; compare gross profit under each assumption*.

(LO 7)

Yuan Li Ltd. is a retailer that uses the perpetual inventory method. All sales returns from customers result in the goods being returned to inventory; the inventory is not damaged. Assume that there are no credit transactions; all amounts are settled in cash. You are provided with the following information for Yuan Li Ltd. for the month of January 2017.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date** |  | **Description** |  | **Quantity** |  | **Unit Cost or Selling Price** |
| January1 |  | Beginning inventory |  | 100 |  | £14 |
| January5 |  | Purchase |  | 150 |  | 17 |
| January8 |  | Sale |  | 110 |  | 28 |
| January 10 |  | Sale return |  | 10 |  | 28 |
| January 15 |  | Purchase |  | 55 |  | 19 |
| January 16 |  | Purchase return |  | 5 |  | 19 |
| January 20 |  | Sale |  | 80 |  | 32 |
| January 25 |  | Purchase |  | 30 |  | 22 |

***Instructions***

(a) For each of the following cost flow assumptions, calculate (i) cost of goods sold, (ii) ending inventory, and (iii) gross profit.

1. FIFO.

2. Moving-average cost.

(iii) Gross profit:

FIFO £2,600

Average £2,452

(b) Compare results for the two cost flow assumptions.

**\*P6-9B** *Determine ending inventory under a perpetual inventory system*.

(LO 7)

Ying Co. Ltd. began operations on July 1. It uses a perpetual inventory system. During July, the company had the following purchases and sales.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Purchases** | | |  |  |
| **Date** |  | **Units** |  | **Unit Cost** |  | **Sales Units** |
| July1 |  | 5 |  | HK$120 |  |  |
| July6 |  |  |  |  |  | 3 |
| July 11 |  | 7 |  | HK$136 |  |  |
| July 14 |  |  |  |  |  | 6 |
| July 21 |  | 8 |  | HK$147 |  |  |
| July 27 |  |  |  |  |  | 6 |

***Instructions***

(a) Determine the ending inventory under a perpetual inventory system using (1) FIFO and (2) moving-average cost.

Ending inventory:

FIFO HK$735

Average HK$715

(b) Which costing method produces the higher ending inventory valuation?

**\*P6-10B** *Compute gross profit rate and inventory loss using gross profit method*.

(LO 8)

Bristol Company lost all of its inventory in a fire on December 26, 2017. The accounting records showed the following gross profit data for November and December.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **November** |  | **December (to 12/26)** |
| Net sales | £600,000 |  | £700,000 |
| Beginning inventory | 30,000 |  | 33,000 |
| Purchases | 368,000 |  | 420,000 |
| Purchase returns and allowances | 13,300 |  | 14,900 |
| Purchase discounts | 8,500 |  | 9,500 |
| Freight-in | 4,800 |  | 5,900 |
| Ending inventory | 33,000 |  | ? |

Bristol is fully insured for fire losses but must prepare a report for the insurance company.

***Instructions***

(a) Compute the gross profit rate for November.

42%

(b) Using the gross profit rate for November, determine the estimated cost of the inventory lost in the fire.

**\*P6-11B** *Compute ending inventory using retail method*.

(LO 8)

Fond du Lac Books SA uses the retail inventory method to estimate its monthly ending inventories. The following information is available for two of its departments at October 31, 2017.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Hardcovers** | | |  | **Paperbacks** | | |
|  | **Cost** |  | **Retail** |  | **Cost** |  | **Retail** |
| Beginning inventory | € 440,000 |  | € 700,000 |  | € 280,000 |  | € 360,000 |
| Purchases | 2,168,000 |  | 3,200,000 |  | 1,155,000 |  | 1,540,000 |
| Freight-in | 20,000 |  |  |  | 12,000 |  |  |
| Purchase discounts | 54,000 |  |  |  | 22,000 |  |  |
| Net sales |  |  | 3,100,000 |  |  |  | 1,570,000 |

At December 31, Fond du Lac Books takes a physical inventory at retail. The actual retailvalues of the inventories in each department are Hardcovers €790,000 and Paperbacks €333,000.

***Instructions***

(a) Determine the estimated cost of the ending inventory for each department at October 31, 2017, using the retail inventory method.

Hardcovers €528,000

(b) Compute the ending inventory at cost for each department at December 31, assuming the cost-toretail ratios for the year are 65% for Hardcovers and 77% for Paperbacks.

**\*P6-12B** *Apply the LIFO cost method (periodic)*.

(LO 9)

Using the data in P6-5B, compute the cost of the ending inventory using the LIFO cost flow assumption. Assume that Lahti Inc. uses the periodic inventory system.

COMPREHENSIVE PROBLEM

**6-CP6** On December 1, 2017, Seattle Company had the account balances shown below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Debit** |  |  | **Credit** |
| Cash | £4,650 |  | Accumulated Depreciation—Equipment | £1,500 |
| Accounts Receivable | 3,900 |  |  | 3,000 |
| Inventory | 1,950\* |  |  | 20,000 |
| Equipment | 21,000 |  |  | 7,000 |
|  | £31,500 |  |  | £31,500 |
| \* (3,000 × £0.65) |  |  |  |  |

The following transactions occurred during December.

Dec. 3 Purchased 4,000 units of inventory on account at a cost of £0.72 per unit.

5 Sold 4,400 units of inventory on account for £0.92 per unit. (It sold 3,000 of the £$0.65 units and 1,400 of the £0.72.)

7 Granted the December 5 customer £184 credit for 200 units of inventory returned costing £144. These units were returned to inventory.

17 Purchased 2,200 units of inventory for cash at £0.78 each.

22 Sold 2,000 units of inventory on account for £0.95 per unit. (It sold 2,000 of the £0.72 units.)

**Adjustment data:**

1. Accrued salaries payable £400.

2. Depreciation £200 per month.

***Instructions***

(a) Journalize the December transactions and adjusting entries, assuming Seattle uses the perpetual inventory method.

(b) Enter the December 1 balances in the ledger T-accounts and post the December transactions. In addition to the accounts mentioned above, use the following additional accounts: Cost of Goods Sold, Depreciation Expense, Salaries and Wages Expense, Salaries and Wages Payable, Sales Revenue, and Sales Returns and Allowances.

(c) Prepare an adjusted trial balance as of December 31, 2017.

(d) Prepare an income statement for December 2017 and a classified statement of financial position at December 31, 2017.

(e) Compute ending inventory and cost of goods sold under FIFO, assuming Seattle Company uses the periodic inventory system.

(f) Compute ending inventory and cost of goods sold under average-cost, assuming Seattle Company uses the periodic inventory system.

MATCHA CREATIONS

(*Note*: This is a continuation of the Matcha Creations problem from Chapter 1-5.)

**MC6**Mei-ling is busy establishing both divisions of her business (cookie classes and mixer sales) and completing her business degree. Her goals for the next 11 months are to sell one mixer per month and to give two to three classes per week.

The cost of the fine European mixers is expected to increase. Mei-ling has just negotiated new terms with Kzinski that include shipping costs in the negotiated purchase price (mixers will be shipped FOB destination). Mei-ling must choose a cost flow assumption for her mixer inventory.

**Go to the book's companion website**, **www.wiley.com/college/weygandt**, **to see the completion of this problem**.**Broadening Your Perspective**

Financial Reporting and Analysis

**BYP6-1. Financial Reporting Problem: TSMC, Ltd. (TWN)**

The notes that accompany a company's financial statements provide informative details that would clutter the amounts and descriptions presented in the statements. Refer to the financial statements of TSMC in Appendix A and the 2013 annual report's Notes to the Consolidated Financial Statements, available in the Investor Relations section of the company's website, *www.tsmc.com*.

***Instructions***

Answer the following questions. Complete the requirements in millions of new Taiwan dollars, as shown in TSMC's annual report.

(a) What did TSMC report for the amount of inventories in its consolidated statement of financial position at December 31, 2013? At December 31, 2012?

(b) Compute the new Taiwan dollar amount of change and the percentage change in inventories between 2012 and 2013. Compute inventory as a percentage of current assets at December 31, 2013.

(c) How does TSMC value its inventories? Which inventory cost flow method does TSMC use? (See Notes to the Consolidated Financial Statements.)

(d) What is the cost of sales (cost of goods sold) reported by TSMC for 2013 and 2012? Compute the percentage of cost of sales to net sales in 2013.

**BYP6-2. Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)**

Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

***Instructions***

(a) Based on the information contained in these financial statements, compute the following ratios for each company for the most recent year shown.

1. Inventory turnover ratio. (Round to one decimal.)

2. Days in inventory. (Round to nearest day.)

(b) What conclusions concerning the management of the inventory can you draw from these data?

**BYP6-3. Real-World Focus**

A company's annual report usually will identify the inventory method used. Knowing that, you can analyze the effects of the inventory method on the income statement and statement of financial position.

***Address:* www.cisco.com**, or go to **www.wiley.com/college/weygandt**

***Instructions***

Answer the following questions based on the current year's annual report on Cisco's (USA) website.

(a) At Cisco's fiscal year-end, what was the inventory on the balance sheet (statement of financial position)?

(b) How has this changed from the previous fiscal year-end?

(c) How much of the inventory was finished goods?

(d) What inventory method does Cisco use?

Critical Thinking

**BYP6-4. Decision-Making Across the Organization**

On April 10, 2017, fire damaged the office and warehouse of Ehlert Company, Ltd. Most of the accounting records were destroyed, but the following account balances were determined as of March 31, 2017: Inventory (January 1, 2017), £80,000; Sales Revenue (January 1-March 31, 2017), £180,000; Purchases (January 1-March 31, 2017), £94,000.

The company's fiscal year ends on December 31. It uses a periodic inventory system.

From an analysis of the April bank statement, you discover cancelled checks of £4,200 for cash purchases during the period April 1-10. Deposits during the same period totaled £20,500. Of that amount, 60% were collections on accounts receivable, and the balance was cash sales.

Correspondence with the company's principal suppliers revealed £12,400 of purchases on account from April 1 to April 10. Of that amount, £1,900 was for merchandise in transit on April 10 that was shipped FOB destination.

Correspondence with the company's principal customers produced acknowledgments of credit sales totaling £37,000 from April 1 to April 10. It was estimated that £5,600 of credit sales will never be acknowledged or recovered from customers.

Ehlert Company reached an agreement with the insurance company that its fire-loss claim should be based on the average of the gross profit rates for the preceding 2 years. The financial statements for 2015 and 2016 showed the following data.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2016** |  | **2015** |
| Net sales | £600,000 |  | £480,000 |
| Cost of goods purchased | 404,000 |  | 346,400 |
| Beginning inventory | 60,000 |  | 40,000 |
| Ending inventory | 80,000 |  | 60,000 |

Inventory with a cost of £17,000 was salvaged from the fire.

***Instructions***

With the class divided into groups, answer the following.

(a) Determine the balances in (1) Sales Revenue and (2) Purchases at April 10.

\* (b) Determine the average gross profit rate for the years 2015 and 2016. (*Hint:* Find the gross profit rate for each year and divide the sum by 2.)

\* (c) Determine the inventory loss as a result of the fire, using the gross profit method.

**BYP6-5. Communication Activity**

You are the controller of Classic Toys Ltd. Kathy McDonnell, the president, recently mentioned to you that she found an error in the 2016 financial statements, which she believes has corrected itself. She determined, in discussions with the Purchasing Department, that 2016 ending inventory

was overstated by €1 million. Kathy says that the 2017 ending inventory is correct. Thus, she assumes that 2017 income is correct. Kathy says to you, “What happened has happened—there's no point in worrying about it anymore.”

***Instructions***

You conclude that Kathy is incorrect. Write a brief, tactful memo to Kathy, clarifying the situation.

A LOOK at U.S. GAAP

The major GAAP requirements related to accounting and reporting for inventories are the same as IFRS. The major differences are that GAAP permits the use of the LIFO cost flow assumption and uses market in the lower-of-cost-or-net realizable value inventory valuation differently.

**Key Points**

* The requirements for accounting for and reporting inventories are more principles-based under IFRS. That is, GAAP provides more detailed guidelines in inventory accounting.
* IFRS requires companies to use the same cost flow assumption for all goods of a similar nature. GAAP has no specific requirement in this area.

**Similarities**

* + The definitions for inventory are essentially similar under GAAP and IFRS. Both define inventory as assets held-for-sale in the ordinary course of business, in the process of production for sale (work in process), or to be consumed in the production of goods or services (e.g., raw materials).
  + Who owns the goods—goods in transit or consigned goods—as well as the costs to include in inventory, are accounted for the same under GAAP and IFRS.

**Differences**

* + Both GAAP and IFRS permit specific identification where appropriate. IFRS actually requires that the specific identification method be used where the inventory items are not interchangeable (i.e., can be specifically identified). If the inventory items are not specifically identifiable, a cost flow assumption is used. GAAP does not specify situations in which specific identification must be used.
  + A major difference between GAAP and IFRS relates to the LIFO cost flow assumption. GAAP permits the use of LIFO for inventory valuation. IFRS prohibits its use. FIFO and average-cost are the only two acceptable cost flow assumptions permitted under IFRS.
  + When testing to see if the value of inventory has fallen below its cost, IFRS defines market as net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs to complete and sell. In other words, net realizable value is the best estimate of the net amounts that inventories are expected to realize. GAAP, on the other hand, defines market as essentially replacement cost. The GAAP method of inventory valuation is often referred to as the lower-of-cost-or-market (LCM).
  + Under GAAP, if inventory is written down under the lower-of-cost-or-market valuation, the new basis is now considered its cost. As a result, the inventory may not be written back up to its original cost in a subsequent period. Under IFRS, the write-down may be reversed in a subsequent period up to the amount of the previous write-down. Both the write-down and any subsequent reversal should be reported on the income statement.
  + An example of the use of lower-of-cost-or-market under GAAP follows.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mendel Company has the following four items in its ending inventory as of December 31, 2017. The company uses the lower-of-cost-or-market approach for inventory valuation following GAAP. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | **Item No.** | | | | | | | | |  | **Cost** | | | | | | | | | | |  | **Market** | | | | | | | | | |  | | | |
|  | | |  |  | | | | |  | | |  |  | | | |  | | |  | | | |  |  |  | | | | |  | | | |  | | | |
|  | | | 1320 | | | | | | | | |  | $3,600 | | | | | | | | | | |  | $3,400 | | | | | | | | | |  | | | |
|  | | | 1333 | | | | | | | | |  | 4,000 | | | | | | | | | | |  | 4,100 | | | | | | | | | |  | | | |
|  | | | 1428 | | | | | | | | |  | 2,800 | | | | | | | | | | |  | 2,100 | | | | | | | | | |  | | | |
|  | | | 1510 | | | | | | | | |  | 5,000 | | | | | | | | | | |  | 4,700 | | | | | | | | | |  | | | |
|  | | |  | | | | | | | | |  |  | | | | | | | | | | |  |  | | | | | | | | | |  | | | |
| The computation of the ending inventory value to be reported in the financial statements at December 31, 2017, is as follows. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **Item No.** | | | | | |  | **Cost** | | | | | | | | | |  | **Market** | | | | | | | | | |  | **LCM** | | | | | | |  | |
|  |  |  | | | |  |  |  | |  | | | | | |  | |  |  | | |  | | | | | |  |  |  | | |  | | |  |  | |
|  | 1320 | | | | | |  | $3,600 | | | | | | | | | |  | $3,400 | | | | | | | | | |  | $3,400 | | | | | | |  | |
|  | 1333 | | | | | |  | 4,000 | | | | | | | | | |  | 4,100 | | | | | | | | | |  | 4,000 | | | | | | |  | |
|  | 1428 | | | | | |  | 2,800 | | | | | | | | | |  | 2,100 | | | | | | | | | |  | 2,100 | | | | | | |  | |
|  | 1510 | | | | | |  | 5,000 | | | | | | | | | |  | 4,700 | | | | | | | | | |  | 4,700 | | | | | | |  | |
|  |  |  | | |  | |  |  | |  | | | |  | | | |  |  | | | |  | | |  | | |  |  | | | |  | |  | |  |
|  | Total | | | | | |  | $15,400 | | | | | | | | | |  | $14,300 | | | | | | | | | |  | $14,200 | | | | | | |  | |
|  |  |  | | |  | |  |  | | |  | | | |  | | |  |  | |  | | | | | |  | |  |  | |  | | | |  |  | |

* IFRS generally requires pre-harvest inventories of agricultural products (e.g., growing crops and farm animals) to be reported at fair value less cost of disposal. GAAP generally requires these items to be recorded at cost.

**Looking to the Future**

One convergence issue that will be difficult to resolve relates to the use of the LIFO cost flow assumption. As indicated, IFRS specifically prohibits its use. Conversely, the LIFO cost flow assumption is widely used in the United States because of its favorable tax advantages. In addition, many argue that LIFO from a financial reporting point of view provides a better matching of current costs against revenue and, therefore, enables companies to compute a more realistic income.

**GAAP Practice**

**GAAP Self-Test Questions**

**1.** Which of the following should **not**be included in the inventory of a company using GAAP?

(a) Goods held on consignment from another company.

(b) Goods shipped on consignment to another company.

(c) Goods in transit from another company shipped FOB shipping point.

(d) None of the above.

**Answer**

(a) Goods held on consignment from another company.

**2.** Which method of inventory costing is prohibited under IFRS?

(a) Specific identification.

(b) LIFO.

(c) FIFO.

(d) Average-cost.

**Answer**

(b) LIFO.

**3.** Yang Company purchased 2,000 widgets and has 400 widgets in its ending inventory at a cost of $90 each and a current replacement cost of $70 each. The net realizable value of each unit in the ending inventory is $80. The ending inventory under lower-of-cost-or-net realizable value is:

(a) $36,000.

(b) $32,000.

(c) $28,000.

(d) None of the above.

**Answer**

(c) $28,000.

**4.** Specific identification:

(a) must be used under IFRS if the inventory items are not interchangeable.

(b) cannot be used under IFRS.

(c) cannot be used under GAAP.

(d) must be used under IFRS if it would result in the most conservative net income.

**Answer**

(a) must be used under IFRS if the inventory items are not interchangeable.

**5.** GAAP requires the following:

(a) Ending inventory is written up and down to market value each reporting period.

(b) Ending inventory is written down to market value but cannot be written up.

(c) Ending inventory is written down to market value and may be written up in future periods to its market value but not above its original cost.

(d) Ending inventory is written down to market value and may be written up in future periods to its market value.

**Answer**

(b) Ending inventory is written down to market value but cannot be written up.

**GAAP Exercises**

**GAAP6-1.** Briefly describe some of the similarities and differences between GAAP and IFRS with respect to the accounting for inventories.

**GAAP6-2.** LaTour Inc. is based in France and prepares its financial statements in accordance with IFRS. In 2017, it reported cost of goods sold of €578 million and average inventory of €154 million. Briefly discuss how analysis of LaTour's inventory turnover ratio (and comparisons to acompany using GAAP) might be affected by differences in inventory accounting between IFRS and GAAP.

**GAAP6-3.** Franklin Company has the following four items in its ending inventory as of December 31, 2017. The company uses the lower-of-cost-or-market approach for inventory valuation following GAAP.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item No.** |  | **Cost** |  | **Market** |
| AB |  | $1,700 |  | $1,400 |
| TRX |  | 2,200 |  | 2,300 |
| NWA |  | 7,800 |  | 7,100 |
| SGH |  | 3,000 |  | 3,700 |

Compute the lower-of-cost-or-market.

**GAAP Financial Reporting Problem: Apple Inc.**

**GAAP6-4.** The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

**Instructions**

Answer the following questions. (Give the amounts in thousands of dollars, as shown in Apple's annual report.)

(a) What did Apple report for the amount of inventories in its consolidated balance sheet at September 28, 2013? At September 29, 2012?

(b) Compute the dollar amount of change and the percentage change in inventories between 2012 and 2013. Compute inventory as a percentage of current assets for 2013.

(c) How does Apple value its inventory, and what cost flow assumption does it use?

(d) What are the (product) cost of goods sold reported by Apple for 2013, 2012, and 2011? Compute the ratio of (product) cost of goods sold to net (product) sales in 2013.