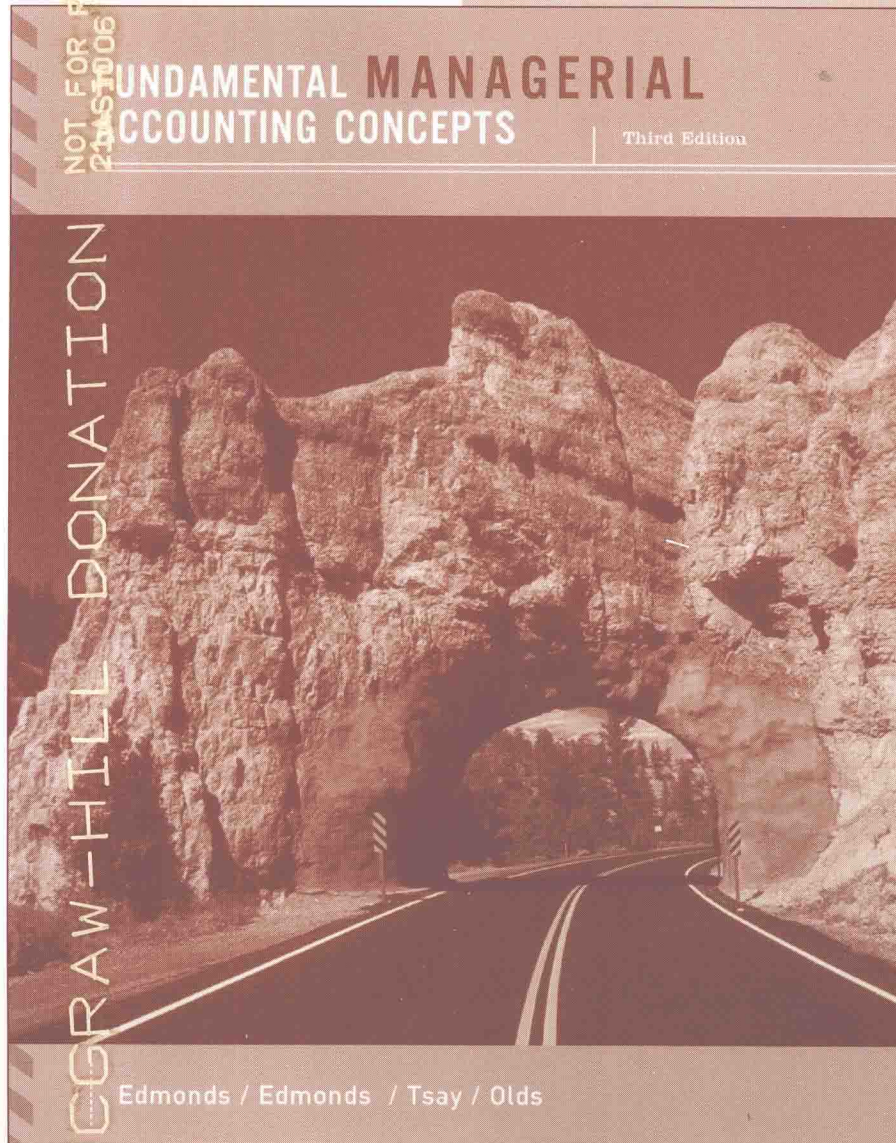


# Study Guide

for use with



Prepared by  
Cindy D. Edmonds  
Philip R. Olds

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# Fundamental Managerial Accounting Concepts

Third Edition

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Thomas P. Edmonds, Cindy D. Edmonds, Bor-Yi Tsay, Philip R. Olds

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1 2 3 4 5 6 7 8 9 0 QPD/QPD 0 9 8 7 6 5

ISBN 0-07-299114-3

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## Chapter 1

### Management Accounting: A Value Added Discipline

#### Learning Objectives for the Chapter

*The material in this chapter of the study guide, is designed to facilitate your ability to:*

1. Distinguish between managerial and financial accounting.
2. Identify the components of the cost of a product made by a manufacturing company: the cost of materials, labor, and overhead.
3. Explain the need to determine the average cost per unit of a product.
4. Distinguish between a cost and an expense.
5. Explain the effects on financial statements of product costs versus general, selling, and administrative costs.
6. Explain how cost classification affects financial statements and managerial decisions.
7. Identify the standards of ethical conduct and the features that motivate misconduct.
8. Distinguish product costs from upstream and downstream cost.
9. Explain how products provided by service companies differ from products made by manufacturing companies.
10. Explain how emerging trends including activity-based management, value-added assessment, and just-in-time inventory are affecting the managerial accounting discipline.

#### Brief Explanation of the Learning Objectives

##### 1. Distinguish between managerial and financial accounting.

Managerial accounting focuses on information that is used for internal decision-making. In contrast, financial accounting focuses on information that is used by investors, creditors, and other interested parties that operate outside the accounting entity. A summary of the key differences between managerial and financial accounting is provided in Exhibit 1-2 of the textbook.

##### 2. Identify the components of the cost of a product made by a manufacturing company: the cost of materials, labor, and overhead.

The cost of products made by a manufacturing company include direct raw materials, direct labor, and indirect manufacturing costs which are called overhead. Examples, of product costs are shown in Exhibit 1-11 of the textbook.

**3. Explain the need to determine the average cost per unit of a product.**

Determining the exact cost of each unit of product made by a company would require an unreasonable amount of record keeping. Indeed, determining the exact cost is virtually impossible. Minute details such as a millisecond of labor cannot be effectively measured. Even if we could determine the exact cost of each table, the information would be of little use. Minor differences in the cost per unit would make no difference in terms of pricing or other decisions that management needs to make. For these reasons, accountants normally calculate cost per unit as an average. The average cost per unit is determined as follows:

$$\text{Total Cost} \div \text{Total Units} = \text{Average Cost Per Unit}$$

**4. Distinguish between a cost and an expense.**

A cost can be accumulated in an asset account before it is expensed. For example, wages of production workers are accumulated in an inventory account before being expensed as cost of goods sold. A cost can also be expensed directly to the income statement. For example, salaries of sales or administrative staff are expensed immediately.

**5. Explain the effects on financial statements of product costs versus general, selling, and administrative costs.**

Product costs including the cost of direct materials, direct labor, and overhead are first accumulated in an inventory account and then expensed as cost of goods sold at the time the inventory is sold. Product costs of goods that have not been sold will appear on the balance sheet while product cost of goods sold will appear on the income statement. Many GS&A costs such as salaries and rent are expensed immediately. However, GS&A costs of long-term assets such as office equipment are accumulated in an asset account and expensed in the period that the asset is used.

**6. Explain how cost classification affects financial statements and managerial decisions**

Managers can delay the recognition of expenses by accumulating costs in asset accounts. Delaying the recognition of expense acts to increase the amount of total assets and amount of reported net income. Accordingly, delaying expense recognition provides a more favorable portrayal of a company's financial condition. In addition, managers who receive a bonus that is based on net income benefit when expense recognition is delayed. Since the delay of expense recognition act to increase net income, it will also act to increase income taxes.

**7. Identify the standards of ethical conduct and the features that motivate misconduct.**

Accountants provide information that is useful for decision-making. If they are not trustworthy, the value of the information they provide is worthless. To secure their value, accountants must abide by a strict code of ethical conduct.

**8. Distinguish product costs from upstream and downstream cost**

Product costs are the costs incurred during the manufacturing process. Most companies incur product-related costs before and after the manufacturing process. Costs that are incurred before the manufacturing process begins are called upstream costs. Examples of upstream costs include research and development costs. Costs that are incurred after the manufacturing process is complete are called downstream costs. Examples of downstream costs include transportation costs, advertising, sales commissions, and bad debts. Profitability analysis requires attention to upstream and downstream costs as well as manufacturing product costs. To be profitable, a company must recover the total cost of developing, producing, and delivering its products to its customers.

**9. Explain how products provided by service companies differ from products made by manufacturing companies.**

Service companies, like manufacturing companies, incur materials, labor, and overhead costs in the process of providing services to their customers. The primary difference between manufacturing entities and service companies is that the products provided by service companies are consumed immediately. Accordingly, service companies normally do not accumulate product costs in an inventory account. Instead, product costs of services companies are usually expensed as they are incurred.

**10. Explain how emerging trends including activity-based management, value-added assessment, and just-in-time inventory are affecting the managerial accounting discipline.**

Business organizations face global competition. In an effort to improve efficiency and effectiveness, companies are demanding that accountants take a more active role in decision-making. Accountants are expected to develop strategies and procedures to more accurately measure and reduce costs, and to identify and eliminate activities that do not add value to the business.

## Multiple Choice Problems

1. Which of the following is a characteristic of managerial accounting?
  - a. Users of the data are insiders such as managers and employees.
  - b. Includes physical information about subunits of an organization.
  - c. Is regulated only by the cost / benefit rule.
  - d. all of the above are characteristics of managerial accounting.
2. Phil Carter is an stockbroker. In this capacity, Phil is interested in which of the following kinds of information.
  - a. information that pertains to the operations of a business such as time cards and work schedules.
  - b. information that is global and pertains to the business as a whole
  - c. information that pertains to the subunits of a business organization.
  - d. both a and c
3. Which of the following is **not** a product cost?
  - a. The cost of ordering production supplies.
  - b. The cost of rent on the manufacturing facility.
  - c. The cost of commissions paid to sales staff.
  - d. a and c.
4. Which of the following statements concerning product versus general, selling, and administrative (GS&A) costs is true?
  - a. Product costs are usually spread between the balance sheet and the income statement.
  - b. GS&A costs never appear on the balance sheet.
  - c. Product costs appear only on the income statement.
  - d. GS&A costs are accumulated in an inventory account before appearing on the income statement.

**The following information applies to the next two questions:**

Newman Industries (NI) makes baby diapers. During the most recent accounting period, NI paid \$90,000 for raw materials, \$78,000 for labor, and \$82,000 for overhead costs that were incurred to start and complete 125,000 boxes of diapers. GS&A Expenses amounted to \$120,000.

5. Assuming NI desires to earn a gross profit that is equal to 60% of product cost. The selling price per box of diapers should be:
  - a. \$2.00
  - b. \$2.60
  - c. \$3.00
  - d. \$3.20



6. If NI sells 110,000 boxes of diapers, the amount of net income will be:
  - a. \$12,000
  - b. \$13,200
  - c. \$22,000
  - d. none of the above.
7. Which of the following statements is true?
  - a. A cost can be recognized as an expense immediately or accumulated in an asset account.
  - b. A cost and an expense are different terms used to describe the same thing.
  - c. An expense can be recognized immediately or accumulated in an asset account.
  - d. Costs incurred for wages of production workers are expensed before they are accumulated in an inventory account.

**The following information applies to the next two questions:**

During 2001, Gary Manufacturing Company (GMC) incurred \$280,000 of manufacturing costs and \$84,000 of GS&A expenses. GMC made 14,000 units of product and sold 12,000 units.

8. Based on the above information, the balance in the inventory account shown on GMC's 12/31/X1 balance sheet is:
  - a. \$220,000
  - b. \$40,000
  - c. \$280,000
  - d. \$24,000
9. Based on the above information, the amount of expense shown on GMC's 12/31/X1 income statement is:
  - a. \$240,000
  - b. \$84,000
  - c. \$324,000
  - d. none of the above
10. Beverly Industries paid cash for the rental of manufacturing equipment. Select the answer that shows the effect that this event would have on the financial statements.

|    | Assets = Liab. + Equity |     |     | Rev. - Exp. = Net Inc. |     |     | Cash Flow |
|----|-------------------------|-----|-----|------------------------|-----|-----|-----------|
| a. | -                       | n/a | -   | n/a                    | -   | -   | n/a       |
| b. | - +                     | n/a | n/a | n/a                    | n/a | n/a | - OA      |
| c. | -                       | n/a | -   | n/a                    | n/a | n/a | - OA      |
| d. | + -                     | n/a | n/a | n/a                    | n/a | n/a | n/a       |

**The following information applies to the next three questions:**

The accounting records of the Areo Manufacturing Company (AMC) contained the following information:

|                                  |          |                                   |           |
|----------------------------------|----------|-----------------------------------|-----------|
| Raw Materials Used               | \$40,000 | Sales Revenue                     | \$192,000 |
| Sales Salaries                   | 12,000   | Indirect Manufacturing Costs      | 68,000    |
| Depreciation on Admin. Equip.    | 8,000    | Depreciation on Production Equip. | 14,000    |
| Wages Paid to Production Workers | 60,000   | Miscellaneous GS&A Expenses       | 18,000    |

AMC made 5,000 units of product and sold 4,000 units during the accounting period. There was no beginning inventory.

11. AMC average product cost per unit is:
  - a. \$33.60
  - b. \$16.40
  - c. \$20.00
  - d. \$36.40
12. The balance in AMC's inventory account as of December 31 is:
  - a. \$36,400
  - b. \$145,600
  - c. \$33,600
  - d. \$182,000
13. The amount of net income appearing on AMC's December 31 income statement is:
  - a. \$26,400
  - b. \$34,400
  - c. \$8,400
  - d. \$46,400
14. The president of Beatty Manufacturing Company is paid an incentive bonus that is equal to 5% of net income. During the current accounting period, Beatty expects to make 10,000 units of product and to sell 9,000 units. Beatty recently incurred a \$1,000,000 manufacturing design cost. There is a debate regarding whether this cost should be classified as a product cost or as an upstream cost. Beatty is in a 30% tax bracket. Based on this information, select the true answer from the following choices.
  - a. The company president will be motivated to classify the cost as a product cost because her bonus will be \$50,000 higher than it will be if the cost is classified as an upstream cost.
  - b. Beatty's income taxes expense will be \$70,000 more if the design cost is classified as a product cost than it will be if it is classified as an upstream cost.
  - c. Beatty's financial statements will portray a more favorable financial position if the design cost is classified as an upstream cost rather than a product cost.
  - d. None of the statements is true.

15. The accountant for Sandy Manufacturing mistakenly classified a selling expense as a product cost during an accounting period in which the company sold more inventory than it produced. Sandy uses a LIFO cost flow system. As a result of this error,
- assets and net income will be overstated.
  - assets will be overstated and net income will be understated.
  - assets and net income will be understated.
  - assets and net income will be unaffected.
16. Which of the following practices is not considered to be an emerging trend in managerial accounting?
- Benchmarking
  - Value-added assessment
  - Stereotyping
  - Activity-based management
17. Which of the following cost is **not** incurred by service companies?
- raw materials cost
  - labor cost
  - overhead cost
  - service companies incur all of the above costs.

## Exercise Type Problems

**P1.** Laio Manufacturing Company makes a high quality picture frame that is sold to photo shops. The company was started on January 1, 2003 when it acquired \$140,000 in cash from its owners. During 2003 the company purchased and used raw materials that cost \$36,400 cash. Wages paid to workers who made the frames amounted to \$47,700 cash. Finally, Laio paid \$46,100 cash for manufacturing overhead costs. The company started and completed the production of 14,000 frames during 2003. The sales price was established at cost plus \$6. Laio sold 12,000 frames for cash during 2003. GS&A expenses amounted to \$51,500 cash.

Required:

1. The problem description references seven distinct business events (the recognition of sales revenue and the recognition of cost of goods sold are considered separate events). Identify these seven events and the dollar amounts associated with each event.
2. Record the events in T-accounts.
3. Prepare an income statement, balance sheet, and statement of cash flows.

### P1. Form for Requirement 1

The seven events are:

- 1.
- 2.
- 3.
- 4.
5. Recognized sales of . . .

Sales Price determined as follows:

Materials

Labor

Overhead

Total Product Cost \_\_\_\_\_ ÷ units = cost per frame

Price = Cost Per Frame + \$6.00 =

- 6.
- 7.

**P1. Form for Requirement 2**

| Exhibit 5-5<br>General Ledger |           |   |                    |
|-------------------------------|-----------|---|--------------------|
| Assets                        |           | = | Equities           |
| Cash                          | Inventory |   | Common Stock       |
|                               |           |   |                    |
|                               |           |   | Retained Earnings  |
|                               |           |   |                    |
|                               |           |   | Revenue            |
|                               |           |   |                    |
|                               |           |   | Cost of Goods Sold |
|                               |           |   |                    |
|                               |           |   | GS&A Expense       |
|                               |           |   |                    |



**P1. Form for Requirement 3**

| Laio Manufacturing Company<br>Financial Statements<br>December 31, 2003 |           |
|---|-----------|
| <b>INCOME STATEMENT</b>   |           |
| Revenue   |           |
| Cost of Goods Sold  |           |
| Gross Margin  |           |
| GS&A Expenses   |           |
| Net Income  | \$ 20,500 |
| <b>BALANCE SHEET</b>  |           |
| Assets  |           |
| Cash  |           |
| Inventory   |           |
| Total Assets  | \$160,500 |
| Equity  |           |
| Common Stock  |           |
| Retained Earnings   |           |
| Total Equity  |           |
| <b>STATEMENTS OF CASH FLOW</b>  |           |
| Cash Flows from Operating Activities                                    |           |
| Cash Receipts from Revenue  |           |
| Cash Payments for Inventory   |           |
| Cash Payments for Expenses  |           |
| Net Cash Flows from Operating Activities                                |           |
| Cash Flows from Investing Activities                                    |           |
| Cash Flows from Financing Activities                                    |           |
| Cash Receipts from Capital Acquisition                                  |           |
| Net Change in Cash  |           |
| Plus Beginning Cash Balance   |           |
| Ending Cash Balance   | \$141,900 |

**P2.** Munford Manufacturing Company was started on January 1, 2003. The company engaged in following accounting events during its first year of operation. With the exception of the adjusting entries for depreciation, assume that all transactions are cash transactions.

1. Acquired \$50,000 of capital from the owners.
2. Paid \$8,000 for the materials that were used to make its products. All products started were completed during the period.
3. Paid salaries of \$3,200 to selling and administrative employees.
4. Paid wages of \$9,500 to production workers.
5. Paid \$6,800 for furniture used in selling and administrative offices.
6. Recognized depreciation on the selling and administrative office furniture. The furniture was acquired on January 1. It had an \$800 estimated salvage value and a 3 year useful life.
7. Paid \$12,500 for manufacturing equipment.
8. Recognized depreciation on the manufacturing equipment. The equipment was acquired on January 1. It had a \$500 estimated salvage value and a 4 year useful life.
9. Sold inventory to customers for \$30,000.
10. Recognized cost of goods sold amounting to \$17,000.

Required: Explain how these events would affect the balance sheet, income statement, and statement of cash flows by recording them in a horizontal financial statements model as indicated below. In the cash column, use the initials OA to designate operating activity, IA for investing activity, and FA for financing activity. The first event is recorded as an example.

**P2. Form for Financial Statements Model**

| Event<br>No. | Assets |             |           |          |       | =      |        | Equity |        |            |       |           |          |   |       |        |  |
|--------------|--------|-------------|-----------|----------|-------|--------|--------|--------|--------|------------|-------|-----------|----------|---|-------|--------|--|
|              | Cash   | + Inventory | + Equip.* | + Furn.* | =     | Cap.   | + Ear. | Rev.   | - Exp. | = Net Inc. |       | Cash Flow |          |   |       |        |  |
| 1            | 50,000 | +           | +         | +        | =     | 50,000 | +      | -      | =      |            |       | 50,000    | FA       |   |       |        |  |
| 2            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 3            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 4            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 5            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 6            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 7            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 8            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 9            |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| 10           |        | +           | +         | +        | =     |        | +      | -      | =      |            |       |           |          |   |       |        |  |
| Totals       | 40,000 | +           | 3,500     | +        | 9,500 | +      | 4,800  | =      | 50,000 | +          | 7,800 | 30,000    | - 22,200 | = | 7,800 | 40,000 |  |

\* Record accumulated depreciation as negative amounts under these columns.

- P3.** The following trial balance was drawn from the records of Schlafly Manufacturing Company (SMC) as of December 31, 2002.

| Account Titles    | Debit           | Credit          |
|-------------------|-----------------|-----------------|
| Cash              | \$60,000        |                 |
| Common Stock      |                 | \$40,000        |
| Retained Earnings |                 | 20,000          |
| Totals            | <u>\$60,000</u> | <u>\$60,000</u> |

During the 2003, the SMC incurred specifically identifiable product costs (i.e., materials, labor and overhead) amounting to \$34,000. In addition, SMC incurred a \$12,000 manufacturing design costs. SMC's accounting staff was in disagreement as to how this design cost should be classified. Some members of the staff thought that the cost should be classified as a product cost (i.e., option no. 1) others believed it should be considered a GSA expense (i.e., option no. 2). During 2003 SMC made 5,000 units of product and sold 4,000 units at a price of \$14 each. All transactions were cash transactions.

Required:

1. Prepare an income statement, balance sheet, and statement of cash flows under each of the two options.
2. Identify the option that results in financial statements that are more likely to leave a favorable impression on investors and creditors.
3. Assume that SMC provides an incentive bonus to the company president that is equal to 10% of net income. Compute the amount of the bonus under each of the two options. Identify the option that provides the president with the higher bonus.
4. Assume a 30% income tax rate. Determine the amount of income tax expense under each of the two options. Identify the option that minimizes the amount of the company's income tax expense.

**P3. Form for Requirement 1**

| Schlafly Manufacturing Company<br>Financial Statements<br>December 31, 2003 |                 |                 |
|---|-----------------|-----------------|
| <b>INCOME STATEMENT</b>   | <b>Option 1</b> | <b>Option 2</b> |
| Revenue   |                 |                 |
| Cost of Goods Sold  |                 |                 |
| Gross Margin  |                 |                 |
| GS&A Expenses   |                 |                 |
| Net Income  | \$19,200        | \$16,800        |
|   |                 |                 |
| <b>BALANCE SHEET</b>  |                 |                 |
| Assets  |                 |                 |
| Cash  |                 |                 |
| Inventory   |                 |                 |
| Total Assets  | \$79,200        | \$76,800        |
|   |                 |                 |
| Equity  |                 |                 |
| Common Stock  |                 |                 |
| Retained Earnings   |                 |                 |
| Total Equity  | \$79,200        | \$76,800        |
|   |                 |                 |
| <b>STATEMENTS OF CASH FLOW</b>  |                 |                 |
| Cash Flows from Operating Activities  |                 |                 |
| Cash Receipts from Revenue  |                 |                 |
| Cash Payments for Inventory   |                 |                 |
| Cash Payments for Expenses  |                 |                 |
| Net Cash Flows from Operating Activities                                    |                 |                 |
| Cash Flows from Investing Activities  |                 |                 |
| Cash Flows from Financing Activities  |                 |                 |
| Net Change in Cash  |                 |                 |
| Plus Beginning Cash Balance   |                 |                 |
| Ending Cash Balance   | \$70,000        | \$70,000        |
|   |                 |                 |