**Chapter 3**

**Operating Decisions and the Accounting System**

**ANSWERS TO QUESTIONS**

1. A typical business operating cycle for a manufacturer would be as follows: inventory is purchased, cash is paid to suppliers, the product is manufactured and sold on credit, and the cash is collected from the customer.

2. The time period assumption means that the financial condition and performance of a business can be reported periodically, usually every month, quarter, or year, even though the life of the business is much longer.

3. Net Income = Revenues + Gains - Expenses - Losses.

Each element is defined as follows:

Revenues -- increases in assets or settlements of liabilities from *ongoing operations.*

Gains -- increases in assets or settlements of liabilities from *peripheral transactions.*

Expenses -- decreases in assets or increases in liabilities from *ongoing operations.*

Losses -- decreases in assets or increases in liabilities from *peripheral transactions.*

1. Both revenues and gains are inflows of net assets. However, revenues occur in the normal course of operations, whereas gains occur from transactions peripheral to the central activities of the company. An example is selling land at a price above cost (at a gain) for companies not in the business of selling land.

Both expenses and losses are outflows of net assets. However, expenses occur in the normal course of operations, whereas losses occur from transactions peripheral to the central activities of the company. An example is a loss suffered from fire damage.

5. Accrual accounting requires recording revenues when earned and recording expenses when incurred, regardless of the timing of cash receipts or payments. Cash basis accounting is recording revenues when cash is received and expenses when cash is paid.

6. The four criteria that must be met for revenue to be recognized under the accrual basis of accounting are (1) delivery has occurred or services have been rendered, (2) there is persuasive evidence of an arrangement for customer payment, (3) the price is fixed or determinable, and (4) collection is reasonably assured.

7. The expense matching principle requires that expenses be recorded when incurred in earning revenue. For example, the cost of inventory sold during a period is recorded in the same period as the sale, not when the goods are produced and held for sale.

8. Net income equals revenues minus expenses. Thus revenues increase net income and expenses decrease net income. Because net income increases stockholders’ equity, revenues increase stockholders’ equity and expenses decrease it.

9. Revenues increase stockholders’ equity and expenses decrease stockholders’ equity. To increase stockholders’ equity, an account must be credited; to decrease stockholders’ equity, an account must be debited. Thus revenues are recorded as credits and expenses as debits.

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| --- | --- | --- | --- |
| 10. | **Item** | **Increase** | **Decrease** |
|  | Revenues | Credit | Debit |
|  | Losses | Debit | Credit |
|  | Gains | Credit | Debit |
|  | Expenses | Debit | Credit |

|  |  |  |  |
| --- | --- | --- | --- |
| 11. | **Item** | **Debit** | **Credit** |
|  | Revenues | Decrease | Increase |
|  | Losses | Increase | Decrease |
|  | Gains | Decrease | Increase |
|  | Expenses | Increase | Decrease |

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| --- | --- | --- | --- |
| 12. | **Transaction** | **Operating, Investing, or Financing** | **Direction**  **of the Effect**  **on Cash** |
|  | Cash paid to suppliers | Operating | – |
|  | Sale of goods on account | None | None |
|  | Cash received from customers | Operating | + |
|  | Purchase of investments | Investing | – |
|  | Cash paid for interest | Operating | – |
|  | Issuance of stock for cash | Financing | + |

1. Total net profit margin ratio is calculated as Net Income ÷ Net Sales (or Operating Revenues). The net profit margin ratio measures how much of every sales dollar is profit. An increasing ratio suggests that the company is managing its sales and expenses effectively.

**ANSWERS TO MULTIPLE CHOICE**

1. c

2. a

3. b

4. b

5. c

6. c

7. d

8. b

9. a

10. b

**MINI-EXERCISES**

**M3–1.**

|  |  |
| --- | --- |
|  | **TERM** |
| G | 1. Losses |
| C | 1. Expense matching principle |
| F | 1. Revenues |
| E | 1. Time period assumption |
| B | 1. Operating cycle |

**M3–2.**

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| --- | --- | --- | --- |
| **Cash Basis**  **Income Statement** | | **Accrual Basis**  **Income Statement** | |
| Revenues:  Cash sales  Customer deposits | $8,000 5,000 | Revenues:  Sales to customers | $18,000 |
| Expenses:  Inventory purchases  Wages paid | 1,000 900 | Expenses:  Cost of sales  Wages expense  Utilities expense | 9,000 900 300 |
| Net Income | $11,100 | Net Income | $7,800 |

**M3–3.**

|  |  |  |
| --- | --- | --- |
|  | **Revenue Account Affected** | **Amount of Revenue Earned in July** |
| *a.* | Games Revenue | $15,000 |
| *b.* | Sales Revenue | $8,000 |
| *c.* | None | No revenue earned in July; cash collections in July related to earnings in June. |
| *d.* | None | No revenue earned in July; earnings process is not yet complete – Unearned Revenue is recorded upon receipt of cash. |

**M3–4.**

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| --- | --- | --- |
|  | **Expense Account Affected** | **Amount of Expense Incurred in July** |
| *e.* | Cost of Goods Sold | $6,800 |
| *f.* | None | No expense is incurred in July; payment related to June electricity usage. |
| *g.* | Wages Expense | $3,500 |
| *h.* | Insurance Expense | $500 incurred and expensed in July and  $1,000 not incurred until future months  (recorded as Prepaid Expense (A)). |
| *i.* | Repairs Expense | $700 |
| *j.* | Utilities Expense | $900 |

**M3–5.**

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| --- | --- | --- | --- |
| *a.* | Cash (+A) | 15,000 |  |
|  | Games Revenue (+R, +SE) |  | 15,000 |

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| *b.* | Cash (+A) | 3,000 |  |
|  | Accounts Receivable (+A) | 5,000 |  |
|  | Sales Revenue (+R, +SE) |  | 8,000 |

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| --- | --- | --- | --- |
| *c.* | Cash (+A) | 4,000 |  |
|  | Accounts Receivable (−A) |  | 4,000 |

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| *d.* | Cash (+A) | 2,500 |  |
|  | Unearned Revenue (+L) |  | 2,500 |

**M3–6.**

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| --- | --- | --- | --- |
| *e.* | Cost of Goods Sold (+E, −SE) | 6,800 |  |
|  | Inventory (−A) |  | 6,800 |

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| --- | --- | --- | --- |
| *f.* | Accounts Payable (–L) | 800 |  |
|  | Cash (−A) |  | 800 |

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| *g.* | Wages Expense (+E, −SE) | 3,500 |  |
|  | Cash (−A) |  | 3,500 |

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| --- | --- | --- | --- |
| *h.* | Insurance Expense (+E, −SE) | 500 |  |
|  | Prepaid Expenses (+A) | 1,00 |  |
|  | Cash (−A) |  | 1,500 |

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| --- | --- | --- | --- |
| *i.* | Repairs Expense (+E, −SE) | 700 |  |
|  | Cash (−A) |  | 700 |

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| --- | --- | --- | --- |
| *j.* | Utilities Expense (+E, −SE) | 900 |  |
|  | Accounts Payable (+L) |  | 900 |

**M3–7.**

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| --- | --- | --- | --- | --- | --- | --- |
|  | **Balance Sheet** | | | **Income Statement** | | |
|  | **Assets** | **Liabilities** | **Stockholders’ Equity** | **Revenues** | **Expenses** | **Net  Income** |
| *a.* | +15,000 | NE | +15,000 | +15,000 | NE | +15,000 |
| *b.* | +8,000 | NE | +8,000 | +8,000 | NE | +8,000 |
| *c.* | +4,000  –4,000 | NE | NE | NE | NE | NE |
| *d.* | +2,500 | +2,500 | NE | NE | NE | NE |

Transaction *(c)* results in an increase in an asset (cash) and a decrease in an asset (accounts receivable). Therefore, there is no net effect on assets.

**M3–8.**

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| --- | --- | --- | --- | --- | --- | --- |
|  | **Balance Sheet** | | | **Income Statement** | | |
|  | **Assets** | **Liabilities** | **Stockholders’ Equity** | **Revenues** | **Expenses** | **Net  Income** |
| *e.* | –6,800 | NE | –6,800 | NE | +6,800 | –6,800 |
| *f.* | –800 | –800 | NE | NE | NE | NE |
| *g.* | –3,500 | NE | –3,500 | NE | +3,500 | –3,500 |
| *h.* | –1,500  +1,000 | NE | –500 | NE | +500 | –500 |
| *i.* | –700 | NE | –700 | NE | +700 | –700 |
| *j.* | NE | +900 | –900 | NE | +900 | –900 |

Transaction *(h)* results in an increase in an asset (prepaid expenses) and a decrease in an asset (cash). Therefore, the net effect on assets is − 500.

**M3–9.**

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| **Craig’s Bowling, Inc.**  **Income Statement**  **For the Month of July 2014** | |
| Revenues: |  |
| Games revenue | $15,000 |
| Sales revenue | 8,000 |
| Total revenues | 23,000 |
| Expenses: |  |
| Cost of goods sold | 6,800 |
| Utilities expense | 900 |
| Wages expense | 3,500 |
| Insurance expense | 500 |
| Repairs expense | 700 |
| Total expenses | 12,400 |
| Net income | $ 10,600 |

**M3–10.**

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| --- | --- | --- |
| **Transaction** | **O, I, or F Activity (or No Effect) on Statement of Cash Flows** | **Direction and Amount of Effect** |
| *a.* | O | +15,000 |
| *b.* | O | +3,000 |
| *c.* | O | +4,000 |
| *d.* | O | +2,500 |
| *e.* | NE | NE |
| *f.* | O | -800 |
| *g.* | O | -3,500 |
| *h.* | O | -1,500 |
| *i.* | O | -700 |
| *j.* | NE | NE |

**M3–11.**

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| --- | --- | --- | --- | --- | --- |
|  | **Net Income** | **÷** | **Net Sales Revenue** | **=** | **Net Profit Margin Ratio** |
| 2015 | $51,000 |  | $163,000 |  | 0.3129 or 31.3% |
| 2014 | 40,000 |  | 151,000 |  | 0.2649 or 26.5% |
| 2013 | 25,000 |  | 132,000 |  | 0.1894 or 18.9% |

These results suggest that Jen’s Jewelry Company earned approximately $0.31 for every dollar of revenue in 2015, and over time, the ratio has improved. Jen’s has become more effective at managing sales and expenses.

As additional analysis:

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|  | **Percentage Change in Net Income** | **Percentage Change in Net Sales Revenue** |
| From 2014 to 2015 | ($51,000 - $40,000) / $40,000  +27.5% | ($163,000 - $151,000) / $151,000  +7.9% |
| From 2013 to 2014 | ($40,000 - $25,000) / $25,000  +60.0% | ($151,000 - $132,000) / $132,000  +14.4% |

Between 2013 to 2014 and 2014 to 2015, sales have increased at a lower percentage than net income. This suggests that the company has been more effective at controlling expenses than generating revenues.

**EXERCISES**

**E3–1.**

|  |  |
| --- | --- |
|  | **TERM** |
| K | (1) Expenses |
| E | (2) Gains |
| G | (3) Revenue realization principle |
| I | (4) Cash basis accounting |
| M | (5) Unearned revenue |
| C | (6) Operating cycle |
| D | (7) Accrual basis accounting |
| F | (8) Prepaid expenses |
| J | (9) Revenues − Expenses = Net Income |
| L | (10) Ending Retained Earnings = |
|  | Beginning Retained Earnings + Net Income − Dividends Declared |

**E3–2.**

Req. 1

|  |  |  |  |
| --- | --- | --- | --- |
| **Cash Basis**  **Income Statement** | | **Accrual Basis**  **Income Statement** | |
| Revenues:  Cash sales  Customer deposits | $500,000 70,000 | Revenues:  Sales to customers | $750,000 | |
| Expenses:  Inventory purchases  Wages paid  Utilities paid | 90,000 180,300 17,200 | Expenses:  Cost of sales  Wages expense  Utilities expense | 485,000 184,000 19,130 | |
| Net Income | $282,500 | Net Income | $61,870 | |

Req. 2

Accrual basis financial statements provide more useful information to external users. Financial statements created under cash basis accounting normally postpone (e.g., $250,000 credit sales) or accelerate (e.g., $70,000 customer deposits) recognition of revenues and expenses long before or after goods and services are produced and delivered (until cash is received or paid). They also do not necessarily reflect all assets or liabilities of a company on a particular date.

**E3–3.**

|  |  |  |
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| **Activity** | **Revenue Account Affected** | **Amount of Revenue**  **Earned in September** |
| *a.* | None | No revenue earned in September; earnings process is not yet complete. |
| *b.* | Interest revenue | $12.50  (= $1,500 x 10% x 1 month/12 months) |
| *c.* | Sales revenue | $19,500 |
| *d.* | None | No transaction has occurred; exchange of promises only. |
| *e.* | Sales revenue | $15,000  (= 1,000 shirts x $15 per shirt)  Revenue earned when goods are delivered. |
| *f.* | None | Payment related to revenue recorded previously in (e) above. |
| *g.* | None | No revenue earned in September; earnings process is not yet complete. |
| *h.* | None | No revenue is earned; the issuance of stock is a financing activity. |
| *i.* | None | No revenue earned in September; earnings process is not yet complete. |
| *j.* | Ticket sales revenue | $3,900,000  (= $19,500,000 ÷ 5 games) |
| *k.* | None | No revenue earned in September; earnings process is not yet complete. |
| *l.* | Sales revenue | $9,600 |
| *m.* | Sales revenue | $300 |

**E3–4.**

|  |  |  |
| --- | --- | --- |
| **Activity** | **Expense Account Affected** | **Amount of Expense**  **Incurred in January** |
| *a.* | Utilities expense | $3,800 | |
| *b.* | Advertising expense | $321  (= $963 x 1 month/3 months) incurred in January.  The remainder is a prepaid expense (A) that is not incurred until February and March. | |
| *c.* | Salaries expense | $201,500 incurred in January.  The remaining half was incurred in December. | |
| *d.* | None | Expense will be recorded when the related revenue has been earned. | |
| *e.* | None | Expense will be recorded in the future when the related revenue has been earned. | |
| *f.* | Cost of goods sold | $47,500  (= 500 books x $95 per book cost) | |
| *g.* | None | December expense paid in January. | |
| *h.* | Commission expense | $15,560 | |
| *i.* | None | Expense will be recorded as depreciation (used portion of asset’s cost) over the equipment’s useful life. | |
| *j.* | Supplies expense | $4,700  (= $3,500 + $2,600 - $1,400) | |
| *k.* | Wages expense | $120  (= 8 hours x $15 per hour) | |
| *l.* | Insurance expense | $400  (= $4,800 ÷ 12 months)  The remaining amount is Prepaid Insurance. | |
| *m.* | Repairs expense | $600 | |
| *n.* | Utilities Expense | $154 | |
| *o.* | Consulting Expense | $2,034 | |
| *p.* | None | December expense paid in January. | |
| *q.* | Cost of goods sold | $4500  (= 450 shirts x $10 per shirt) | |

**E3–5.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Balance Sheet** | | | **Income Statement** | | |
|  | **Assets** | **Liabilities** | **Stockholders’ Equity** | **Revenues** | **Expenses** | **Net  Income** |
| *a.* | + | NE | + | NE | NE | NE |
| *b.* | + | + | NE | NE | NE | NE |
| *c.* | - | NE | - | NE | NE | NE |
| *d.* | + | NE | + | + | NE | + |
| *e.* | NE | + | – | NE | + | – |
| *f.* | + | NE | + | + | NE | + |
| *g.* | – | – | NE | NE | NE | NE |
| *h.* | – | NE | – | NE | + | – |
| *i.* | + | NE | + | + | NE | + |
| *j.* | + | + | NE | NE | NE | NE |
| *k.* | + / – | NE | NE | NE | NE | NE |
| *l.* | – | NE | – | NE | + \* | – |
| *m.* | – | + | – | NE | + | – |
| *n.* | – | NE | – | NE | + | – |

Transaction *(k)* results in an increase in an asset (cash) and a decrease in an asset (accounts receivable). Therefore, there is no net effect on assets.

\* A loss affects net income negatively, as do expenses.

**E3–9.**

|  |  |  |  |
| --- | --- | --- | --- |
| 2/1 | Rent expense (+E, −SE) | 275 |  |
|  | Cash (−A) |  | 275 |
|  |  |  |  |
| 2/2 | Fuel expense (+E, −SE) | 490 |  |
|  | Accounts payable (+L) |  | 490 |
|  |  |  |  |
| 2/4 | Cash (+A) | 820 |  |
|  | Unearned revenue (+L) |  | 820 |
|  |  |  |  |
| 2/7 | Cash (+A) | 910 |  |
|  | Transport revenue (+R, +SE) |  | 910 |
|  |  |  |  |
| 2/10 | Advertising expense (+E, −SE) | 175 |  |
|  | Cash (−A) |  | 175 |
|  |  |  |  |
| 2/14 | Wages payable (−L) | 2,300 |  |
|  | Cash (−A) |  | 2,300 |
|  |  |  |  |
| 2/18 | Cash (+A)  Accounts receivable (+A) | 1,600  2,200 |  |
|  | Transport revenue (+R, +SE) |  | 3,800 |
|  |  |  |  |
| 2/25 | Parts supplies (+A) | 2,550 |  |
|  | Accounts payable (+L) |  | 2,550 |
|  |  |  |  |
| 2/27 | Retained earnings (−SE) | 200 |  |
|  | Dividends payable (+L) |  | 200 |