Chapter 14

Statement of Cash Flows

Solutions to Questions

**14-1** The statement of cash flows highlights the major activities that impact cash flows and hence affect the overall cash balance.

**14-2** Cash equivalents are short-term, highly liquid investments such as Treasury bills, commercial paper, and money market funds. They are included with cash because investments of this type are made solely for the purpose of generating a return on temporarily idle funds and they can be easily converted to cash.

**14-3** (1) Operating activities: Include cash inflows and outflows related to revenue and expense transactions that affect net income.

(2) Investing activities: Include cash inflows and outflows related to acquiring or disposing of noncurrent assets.

(3) Financing activities: Include cash inflows and outflows related to borrowing from and repaying principal to creditors and completing transactions with the company’s owners.

**14-4** The company’s specific circumstances should be considered when interpreting the statement of cash flows. The relationships among numbers should also be considered rather than evaluating each number in isolation.

**14-5** Since the entire cash proceeds from the sale of a noncurrent asset appear as a cash inflow from investing activities, the gain must be deducted from net income to avoid double counting a portion of those proceeds.

**14-6** Transactions involving accounts payable are not considered to be financing activities because such transactions relate to a company’s day-to-day operating activities rather than to its financing activities.

**14-7** The repayment of $300,000 and the borrowing of $500,000 must both be shown “gross” on the statement of cash flows. That is, the company would show $500,000 of cash provided by financing activities and then show $300,000 of cash used by financing activities.

**14-8** The direct method reconstructs the income statement on a cash basis by restating revenues and expenses in terms of cash inflows and outflows. The indirect method starts with net income and adjusts it to a cash basis to determine the net cash provided by operating activities.

**14-9** Depreciation is not a cash inflow, even though it is added to net income on the statement of cash flows. Adding depreciation to net income to compute the amount of net cash provided by operating activities creates the *illusion* that depreciation is a cash inflow. It isn’t.

**14-10** An increase in the Accounts Receivable account must be subtracted from net income under the indirect method because this is an increase in a noncash asset.

**14-11** A sale of equipment for cash would be classified as an investing activity. Any transaction involving the acquisition or disposition of noncurrent assets is classified as an investing activity.

**14-12** Free cash flow is net cash provided by operating activities minus capital expenditures and dividends.

**The Foundational 15**

1. The net decrease in cash and cash equivalents would equal the $9,000 decrease in the cash balance (from $57,000 to $48,000) as shown on the balance sheet.

2. The basic equation for stockholders’ equity accounts can be applied to the Retained Earnings account to compute the net income of $2,000 as follows:

Beginning balance – Debits + Credits = Ending balance

$61,000 – $6,000 + Credits = $57,000

$55,000 + Credits = $57,000

Credits = $2,000

3. The basic equation for contra-asset accounts can be applied to the Accumulated Depreciation account to compute the depreciation of $19,000 that needs to be added to net income as follows:

Beginning balance – Debits + Credits = Ending balance

$35,000 – $4,000 + Credits = $50,000

$31,000 + Credits = $50,000

Credits = $19,000

Note to Instructors: Questions 4-9 are intended to help students move past strict memorization to better understand the underlying reasons for the adjustments in step 2 of the indirect method.

4. The completed T-account is as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Accounts Receivable | | | | |
| Beg. Bal.  Sales on account | 44,000  600,000 | | Cash collections | 603,000 |
| End. Bal. | | 41,000 |  |  |

The total amount of credits recorded in accounts receivable is $603,000. This amount represents the cash collections from customers.

**The Foundational 15** (continued)

5. The accounts receivable balance decreased by $3,000; therefore, the $3,000 decrease is added to net income. This adjustment reflects the fact (as depicted in the solution to question 4) that cash collections from customers of $603,000 were $3,000 higher than the credit sales of $600,000 included in the income statement.

6. The completed T-accounts are as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Inventory | | | | |
| Beg. Bal.  Purchases | 50,000  405,000 | | Goods sold | 400,000 |
| End. Bal. | | 55,000 |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Accounts Payable | | | | |
| Supplier payments | 430,000 | | Beg. Bal.  Purchases | 57,000  405,000 |
|  | |  | End. Bal. | 32,000 |

The total amount of inventory purchases debited to inventory and credited to accounts payable is $405,000. Therefore, the total amount of the debits to accounts payable is $430,000. The amount of the debits to accounts payable represents to total cash paid to suppliers.

7. The inventory balance increased by $5,000; therefore, this amount is subtracted from net income. The accounts payable balance decreased by $25,000; therefore, this amount is also subtracted from net income. The combined amount of these adjustments is a $30,000 deduction from net income. This adjustment reflects the fact (as shown in the solution to question 6) that cash paid to suppliers of $430,000 is $30,000 higher than the cost of goods sold of $400,000 included in the income statement.

8. The completed T-account is as follows;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Income Taxes Payable | | | | |
| Tax payments | 3,700 | | Beg. Bal.  Taxes payable | 28,000  700 |
|  | |  | End. Bal. | 25,000 |

The total amount of debits recorded in income taxes payable is $3,700. This amount represents the cash paid for income taxes.

**The Foundational 15** (continued)

9. The income taxes payable balance decreased by $3,000; therefore, the $3,000 decrease is subtracted from net income. This adjustment reflects the fact (as depicted in the solution to question 8) that cash paid for income taxes of $3,700 is $3,000 higher than the income tax expense of $700 included in the income statement.

10. The operating activities section of the statement of cash flows would contain an adjustment related to a gain on the sale of a piece of equipment. The equipment was sold for $3,000 and it had a book value at the time of its sale of $2,000 (= $6,000 original cost − $4,000 of accumulated depreciation); therefore, the company would record a $1,000 gain on the sale. This amount would be subtracted from net income in the operating activities section of the statement.

11. The net cash provided by operating activities would be computed as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Net income |  | | $  2,000 |
| Adjustments to convert net income to a cash basis: |  | |  |
| Depreciation | $19,000 |  | |
| Decrease in accounts receivable | 3,000 |  | |
| Increase in inventory | (5,000) |  | |
| Decrease in accounts payable | (25,000) |  | |
| Decrease in income taxes payable | (3,000) |  | |
| Gain on sale of equipment | (1,000) | | (12,000) |
| Net cash used in operating activities |  | | $(10,000) | |

12. The gross cash outflows of $16,000 can be computed by applying the basic equation for assets to the Property, Plant, and Equipment account as follows:

Beginning balance + Debits – Credits = Ending balance

$140,000 + Debits – $6,000 = $150,000

Debits = $150,000 – $140,000 + $6,000

Debits = $16,000

**The Foundational 15** (continued)

13. The net cash provided by (used in) investing activities is $(13,000). This amount includes the $(16,000) cash outflow related to the purchase of property, plant, and equipment (as computed in question 12) and the $3,000 cash inflow from the sale of equipment.

14. The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact financing cash flows as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable | + 10,000 |  |
| Common stock | + 10,000 |  |

Because Ravenna did not retire any bonds or repurchase any of its own common stock during the year, the corresponding amounts in the table above represent the gross cash inflows that are included in financing section of the statement of cash flows.

15. The cash inflows of $20,000 from the issuance of bonds and common stock (as computed in question 14) minus the cash dividend of $6,000 equals net cash provided by (used in) financing activities of $14,000.

**Exercise 14-1** (15 minutes)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  | Activity |  |
|  | Transaction | Operating | Investing | Financing |
| a. | Collected cash from customers | X |  |  |
| b. | Paid cash to repurchase its own stock |  |  | X |
| c. | Borrowed money from a creditor |  |  | X |
| d. | Paid suppliers for inventory purchases | X |  |  |
| e. | Repaid the principal amount of a debt |  |  | X |
| f. | Paid interest to lenders | X |  |  |
| g. | Paid a cash dividend to stockholders |  |  | X |
| h. | Sold common stock |  |  | X |
| i. | Loaned money to another entity |  | X |  |
| j. | Paid taxes to the government | X |  |  |
| k. | Paid wages and salaries to employees | X |  |  |
| l. | Purchased equipment with cash |  | X |  |
| m. | Paid bills to insurers and utility providers | X |  |  |

**Exercise 14-2** (15 minutes)

The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 19,000 |  |
| Inventory | – 33,000 |  |
| Prepaid expenses |  | + 1,000 |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 15,000 |  |
| Accrued liabilities |  | – 2,000 |
| Income taxes payable | + 4,000 |  |

The net cash provided by operating activities is computed as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $35,000 |
| Adjustments to convert net income to a cash basis: |  |  |
| Depreciation | $20,000 |  |
| Increase in accounts receivable | (19,000) |  |
| Increase in inventory | (33,000) |  |
| Decrease in prepaid expenses | 1,000 |  |
| Increase in accounts payable | 15,000 |  |
| Decrease in accrued liabilities | (2,000) |  |
| Increase in income taxes payable | 4,000 | (14,000) |
| Net cash provided by operating activities |  | $21,000 |

**Exercise 14-3** (5 minutes)

|  |  |  |
| --- | --- | --- |
| Free cash flow computation: Net cash provided by operating activities |  | $   34,000 |
| Capital expenditures | $110,000 |  |
| Dividends | 30,000 | 140,000 |
| Free cash flow |  | $(106,000) |

**Exercise 14-4** (30 minutes)

Net cash provided by operating activities:

Step 1: The company did not sell or retire any plant and equipment during the year (land is not depreciated); therefore, the $60 increase in Accumulated Depreciation equals the credit to the account that is added to net income.

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 110 |  |
| Inventory |  | + 70 |
| Prepaid expenses | * 9 |  |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 35 |  |
| Accrued liabilities |  | – 4 |
| Income taxes payable | + 8 |  |

Step 3: The gain on sale of investments ($10) is subtracted from net income and the loss on the sale of land ($6) is added to net income.

**Exercise 14-4** (continued)

The net cash provided by operating activities is computed as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Net income |  | $ 84 |
|  | Adjustments to convert net income to a cash basis: |  |  |
|  | Depreciation | $60 |  |
|  | Increase in accounts receivable | (110) |  |
|  | Decrease in inventory | 70 |  |
|  | Increase in prepaid expenses | (9) |  |
|  | Increase in accounts payable | 35 |  |
|  | Decrease in accrued liabilities | (4) |  |
|  | Increase in income taxes payable | 8 |  |
|  | Gain on sale of long-term investments | (10) |  |
|  | Loss on sale of land | 6 | 46 |
|  | Net cash provided by operating activities |  | $130 |

2. Prepare a statement of cash flows for the year

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | – 185 |  |
| Long-term investments |  | + 6 |
|  |  |  |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable | +150 |  |
| Common stock |  | * 80 |

**Exercise 14-4** (continued)

Because Pavolik did not retire any bonds or issue any of its own stock during the year, the corresponding amounts in the table on the prior page represent the gross cash flows that are included in the statement of cash flows. Property, plant, and equipment, long-term investments, and retained earnings require further analysis as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Property, Plant, and Equipment | | | |
| Additions | 200 | Sale of land | 15 |
| Change | 185 |  |  |

The statement of cash flows must report the gross cash outflow of $200 and the gross cash inflow related to the sale of land of $9.

|  |  |  |  |
| --- | --- | --- | --- |
| Long-Term Investments | | | |
| Additions | 0 | Sale | 6 |
|  |  | Change | 6 |

The statement of cash flows must report the gross cash inflow related to the sale of the investment of $16. The company did not purchase any long-term investments during the year.

|  |  |  |  |
| --- | --- | --- | --- |
| Retained Earnings | | | |
| Dividends | 30 | Net income | 84 |
|  |  | Change | 54 |

The statement of cash flows must report the dividend payment of $30.

**Exercise 14-4** (continued)

|  |  |
| --- | --- |
|  | Pavolik Company |
|  | Statement of Cash Flows |

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Operating activities:* |  |  |
|  | Net cash provided by operating activities |  | $ 130 |
|  |  |  |  |
|  | *Investing activities:* |  |  |
|  | Proceeds from sale of long-term investments | $ 16 |  |
|  | Proceeds from sale of land | 9 |  |
|  | Additions to property, plant, & equipment | (200) |  |
|  | Net cash used in investing activities |  | (175) |
|  |  |  |  |
|  | *Financing activities:* |  |  |
|  | Issuance of bonds payable | 150 |  |
|  | Purchase of common stock | (80) |  |
|  | Cash dividends | (30) |  |
|  | Net cash used in financing activities |  | 40 |
|  |  |  |  |
|  | Net increase in cash (net cash flow) |  | (5) |
|  | Beginning cash and cash equivalents |  | 90 |
|  | Ending cash and cash equivalents |  | $ 85 |

**Exercise 14-5** (10 minutes)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Amount | | Add | Subtract |
| Accounts receivable | $90,000 | decrease | X |  |
| Inventory | $120,000 | increase |  | X |
| Prepaid expenses | $3,000 | decrease | X |  |
| Accounts payable | $65,000 | decrease |  | X |
| Accrued liabilities | $8,000 | increase | X |  |
| Income taxes payable | $12,000 | increase | X |  |
| Sale of equipment | $7,000 | gain |  | X |
| Sale of long-term investments | $10,000 | loss | X |  |

**Exercise 14-6** (30 minutes)

1. Prepare a statement of cash flows:

Operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$50 – $0 + Credits = $65

Credits = $65 – $50

Credits = $15

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in*  *Account Balance* | *Decrease in*  *Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable |  | + 2 |
| Inventory | – 10 |  |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 4 |  |

Step 3: There were no gains or losses reported in the income statement.

**Exercise 14-6** (continued)

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | – 40 |  |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Common stock | + 5 |  |

Because Carmono did not sell any plant and equipment and it did not repurchase any of its own stock, the amounts above represent gross cash flows.

The following equation can be applied to the Retained Earnings account to compute the dividend payment (the debit to the account):

Beginning balance – Debits + Credits = Ending balance

$39 – Debits + $35 = $60

$74 = $60 + Debits

Debits = $14

**Exercise 14-6** (continued)

|  |
| --- |
| Carmono Company |
| Statement of Cash Flows |
| For This Year Ended December 31 |

|  |  |  |
| --- | --- | --- |
| *Operating activities:* |  |  |
| Net income |  | $35 |
| Adjustments to convert net income to a cash basis: |  |  |
| Depreciation | $15 |  |
| Decrease in accounts receivable | 2 |  |
| Increase in inventory | (10) |  |
| Increase in accounts payable | 4 | 11 |
| Net cash provided by operating activities |  | 46 |
|  |  |  |
| *Investing activities:* |  |  |
| Increase in plant and equipment | (40) |  |
| Net cash used in investing activities |  | (40) |
|  |  |  |
| *Financing activities:* |  |  |
| Increase in common stock | 5 |  |
| Cash dividends | (14) |  |
| Net cash used in financing activities |  | (9) |
|  |  |  |
| Net decrease in cash |  | (3) |
| Beginning cash and cash equivalents |  | 6 |
| Ending cash and cash equivalents |  | $ 3 |
|  |  |  |

2. Free cash flow computation:

|  |  |  |
| --- | --- | --- |
| Net cash provided by operating activities |  | $ 46 |
| Capital expenditures | $40 |  |
| Dividends | 14 | 54 |
| Free cash flow |  | $(8) |

**Problem 14-7** (30 minutes)

1. Net cash provided by operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$85 – $16 + Credits = $93

Credits = $93 – $85 + $16

Credits = $24

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 100 |  |
| Inventory |  | + 50 |
| Prepaid expenses | – 4 |  |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 80 |  |
| Accrued liabilities |  | – 12 |
| Income taxes payable | + 6 |  |

Step 3: The gain on sale of investments ($7) is subtracted from net income and the loss on the sale of equipment ($4) is added to net income.

**Problem 14-7** (continued)

The net cash provided by operating activities is computed as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $ 63 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $24 |  |
| Increase in accounts receivable | (100) |  |
| Decrease in inventory | 50 |  |
| Increase in prepaid expenses | (4) |  |
| Increase in accounts payable | 80 |  |
| Decrease in accrued liabilities | (12) |  |
| Increase in income taxes payable | 6 |  |
| Gain on sale of investments | (7) |  |
| Loss on sale of equipment | 4 | 41 |
| Net cash provided by operating activities |  | $104 |

2. Prepare a statement of cash flows.

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | –140 |  |
| Long-term investments |  | + 3 |
|  |  |  |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable | + 110 |  |
| Common stock |  | – 40 |

**Problem 14-7** (continued)

The decrease in the long-term investments account ($3) equals the cost of the long-term investment sold; therefore, Weaver did not purchase any long-term investments during the year. The proceeds from the sale of a long-term investment ($10) should be recorded as a cash inflow in the investing activities section of the statement.

Because Weaver did not retire any bonds during the year, the corresponding amount in the table on the prior page (+110) represents the gross cash inflow pertaining to a bond issuance. The company repurchased $40 of its own stock, so the corresponding amount on the prior page is reported as a cash outflow in the financing activities section in the statement of cash flows. Property, plant, and equipment and retained earnings require further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$470 + Debits – $40 = $610

Debits = $610 – $470 + $40

Debits = $180

The additions to property, plant, and equipment ($180) are recorded as a cash outflow and the proceeds from the sale of equipment ($20) are recorded as a cash inflow.

Retained earnings:

Beginning balance – Debits + Credits = Ending balance

$74 – Debits + $63 = $107

$137 = $107 + Debits

Debits = $30

The dividend payment ($30) should be recorded as a cash outflow in the financing activities section of the statement.

**Problem 14-7** (continued)

|  |  |
| --- | --- |
|  | Weaver Company |
|  | Statement of Cash Flows |
|  | For the Year Ended December 31, 2014 |

|  |  |  |
| --- | --- | --- |
| *Operating activities:* |  |  |
| Net income |  | $ 63 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $ 24 |  |
| Increase in accounts receivable | (100) |  |
| Decrease in inventory | 50 |  |
| Increase in prepaid expenses | (4) |  |
| Increase in accounts payable | 80 |  |
| Decrease in accrued liabilities | (12) |  |
| Increase in income taxes payable | 6 |  |
| Gain on sale of investments | (7) |  |
| Loss on sale of equipment | 4 | 41 |
| Net cash provided by operating activities |  | 104 |
|  |  |  |
| *Investing activities:* |  |  |
| Proceeds from sale of long-term investments | 10 |  |
| Proceeds from sale of equipment | 20 |  |
| Additions to plant and equipment | (180) |  |
| Net cash used in investing activities |  | (150) |
|  |  |  |
| *Financing activities:* |  |  |
| Issuance of bonds payable | 110 |  |
| Decrease in common stock | (40) |  |
| Cash dividends | (30) |  |
| Net cash used in financing activities |  | 40 |
|  |  |  |
| Net decrease in cash |  | (6) |
| Beginning cash and cash equivalents |  | 15 |
| Ending cash and cash equivalents |  | $  9 |

**Problem 14-8** (20 minutes)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Transaction | Operating | Investing | Financing | Cash  Inflow | Cash  Outflow |
| a. | Paid suppliers for inventory purchases | X |  |  |  | X |
| b. | Bought equipment for cash |  | X |  |  | X |
| c. | Paid cash to repurchase its own stock |  |  | X |  | X |
| d. | Collected cash from customers | X |  |  | X |  |
| e. | Paid wages to employees | X |  |  |  | X |
| f. | Equipment was sold for cash |  | X |  | X |  |
| g. | Common stock was sold for cash |  |  | X | X |  |
| h. | Cash dividends were declared and paid |  |  | X |  | X |
| i. | A long-term loan was made to a supplier |  | X |  |  | X |
| j. | Income taxes were paid to the government | X |  |  |  | X |
| k. | Interest was paid to a lender | X |  |  |  | X |
| l. | Bonds were retired by paying the principal amount due |  |  | X |  | X |

**Problem 14-9** (60 minutes)

The forthcoming explanation is broken down into eight steps.

1. The statement of cash flows summarizes all of a company’s cash inflows and outflows during a period, thereby explaining the difference between its beginning and ending cash balance.

2. The statement is divided into three sections—operating activities, investing activities, and financing activities. The operating activities section summarizes the cash inflows and outflows related to revenue and expense transactions that affect net income. The investing activities section summarizes the cash inflows and outflows related to acquiring or disposing of noncurrent assets. The financing activities section summarizes the cash inflows and outflows related to borrowing from and repaying principal to creditors and completing transactions with the company’s owners.

3. The indirect method of preparing the operating activities section of the statement of cash flows begins with net income and adjusts it to a cash basis. The first step in completing the indirect method is to add depreciation to net income. The total credits to Brock’s Accumulated Depreciation account equal $140, so this amount is added to net income. Because Brock is a merchandiser, the $140 corresponds to its depreciation expense, which is a noncash expense that must be added to net income to translate to a cash basis.

4. The second step is to analyze net changes in noncash balance sheet accounts that impact the computation of net income. For Brock, this includes Accounts Receivable, Inventory, Accounts Payable, Accrued Liabilities, and Income Taxes Payable.

The accounts receivable balance increased by $24. This means that Brock’s sales on account were greater than its cash collections from customers by $24. Because the income statement records sales and not cash collections from customers, $24 must be subtracted from net income to translate it to a cash basis.

**Problem 14-9** (continued)

The inventory balance decreased by $39. This means that Brock’s inventory purchases were less than its cost of goods sold by $39. Brock’s cost of goods sold was $2,980; therefore, its inventory purchases were $2,941. The company’s accounts payable balance decreased by $45. This means that Brock’s inventory purchases were $45 less than its cash payments to suppliers. Brock’s inventory purchases were $2,941; therefore, its payments to suppliers must be $2,986. Because the income statement records cost of goods sold ($2,980) and not cash paid to suppliers ($2,986), $6 must be subtracted from net income to translate it to cash basis. If the inventory and accounts payable adjustments are combined it equals a $6 subtraction from net income.

The accrued liabilities balance decreased by $5. This means that Brock’s accrued expenses are $5 less than its payments to vendors. Because the income statement records accrued expenses and not cash payments to vendors, $5 must be subtracted from net income to translate it to a cash basis.

The income taxes payable balance increased by $6. This means that Brock’s accrued income tax expense is $6 greater than its tax payments to governmental bodies. Because the income statement records income tax expense and not tax payments, $6 must be added to net income to translate it to a cash basis.

5. The third step of the indirect method is to adjust for gains/losses included in the income statement. This adjustment is necessary because the cash realized from the sale of noncurrent assets must be disclosed in the investing activities section of the statement of cash flows. The adjustment in step 3 cancels the impact a gain or loss has on the computation of net income. Because gains increase net income, in step 3 we subtract gains from net income. Brock’s income statement includes a gain of $4, so this amount must be subtracted from net income.

**Problem 14-9** (continued)

6. The investing activities section of Brock’s statement of cash flows records the gross cash flows related to its property, plant, and equipment. The statement includes a $150 cash outflow related to additions to property, plant, and equipment, and a $19 cash inflow related to the proceeds from the sale of property, plant, and equipment.

7. The financing activities section of Brock’s statement of cash flows records the gross cash flows related to its bonds payable, common stock, and dividends. The statement includes a $40 cash inflow related to the issuance of bonds. It also includes a $4 cash inflow related to issuing common stock and a $35 cash outflow related to paying dividends.

8. The net increase in cash and cash equivalents ($260) explains the difference between the beginning and ending cash balances.

**Problem 14-10** (45 minutes)

1. Net cash provided by operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$120,000 – $30,000 + Credits = $132,000

Credits = $132,000 – $120,000 + $30,000

Credits = $42,000

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 80,000 |  |
| Inventory | – 50,000 |  |
| Prepaid expenses |  | + 7,000 |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 60,000 |  |
| Accrued liabilities |  | – 10,000 |
| Income taxes payable | + 3,000 |  |

Step 3: The gain on sale of equipment ($8,000) is subtracted from net income.

**Problem 14-10** (continued)

The net cash provided by operating activities is computed as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $56,000 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $ 42,000 |  |
| Increase in accounts receivable | (80,000) |  |
| Increase in inventory | (50,000) |  |
| Decrease in prepaid expenses | 7,000 |  |
| Increase in accounts payable | 60,000 |  |
| Decrease in accrued liabilities | (10,000) |  |
| Increase in income taxes payable | 3,000 |  |
| Gain on sale of equipment | (8,000) | (36,000) |
| Net cash provided by operating activities |  | $20,000 |
|  |  |  |

2. Prepare a statement of cash flows.

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| Noncurrent Assets |  |  |
| Property, plant, and equipment | – 110,000 |  |
| Loan to Hymans Company | – 40,000 |  |
|  |  |  |
|  |  |  |
| Liabilities and Stockholders’ Equity |  |  |
| Bonds payable | + 120,000 |  |
| Common stock | + 30,000 |  |

**Problem 14-10** (continued)

The loan to Hymans ($40,000) is recorded as a cash outflow in the investing activities section of the statement. Because Joyner did not retire any bonds during the year, the corresponding amount in the table on the prior page (+120,000) represents a cash inflow pertaining to a bond issuance. Joyner did not repurchase any of its own stock during the year, so the increase in common stock (+30,000) is reported as a cash inflow in the financing activities section of the statement. Property, plant, and equipment and retained earnings require further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$400,000 + Debits – $40,000 = $510,000

Debits = $510,000 – $400,000 + $40,000

Debits = $150,000

The additions to property, plant, and equipment ($150,000) are recorded as a cash outflow and the proceeds from the sale of equipment ($18,000) are recorded as a cash inflow.

Retained earnings:

Beginning balance – Debits + Credits = Ending balance

$83,000 – Debits + $56,000 = $124,000

$139,000 = $124,000 + Debits

Debits = $15,000

The dividend payment ($15,000) should be recorded as a cash outflow in the financing activities section of the statement.

**Problem 14-10** (continued)

|  |  |
| --- | --- |
|  | Joyner Company |
|  | Statement of Cash Flows |
|  | For Year 2 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Operating activities:* |  |  |
|  | Net income |  | $ 56,000 |
|  | Adjustments to convert net income to cash basis: |  |  |
|  | Depreciation | $ 42,000 |  |
|  | Increase in accounts receivable | (80,000) |  |
|  | Increase in inventory | (50,000) |  |
|  | Decrease in prepaid expenses | 7,000 |  |
|  | Increase in accounts payable | 60,000 |  |
|  | Decrease in accrued liabilities | (10,000) |  |
|  | Increase in income taxes payable | 3,000 |  |
|  | Gain on sale of equipment | (8,000) | (36,000) |
|  | Net cash provided by operating activities |  | 20,000 |
|  |  |  |  |
|  | *Investing activities:* |  |  |
|  | Proceeds from sale of equipment | 18,000 |  |
|  | Loan to Hymans Company | (40,000) |  |
|  | Additions to plant and equipment | (150,000) |  |
|  | Net cash used in investing activities |  | (172,000) |
|  |  |  |  |
|  | *Financing activities:* |  |  |
|  | Issuance of bonds payable | 120,000 |  |
|  | Issuance of common stock | 30,000 |  |
|  | Cash dividends | (15,000) |  |
|  | Net cash provided by financing activities |  | 135,000 |
|  |  |  |  |
|  | Net decrease in cash |  | (17,000) |
|  | Beginning cash and cash equivalents |  | 21,000 |
|  | Ending cash and cash equivalents |  | $  4,000 |
|  |  |  |  |

**Problem 14-10** (continued)

3. Free cash flow computation:

|  |  |  |
| --- | --- | --- |
| Net cash provided by operating activities |  | $   20,000 |
| Capital expenditures | $150,000 |  |
| Dividends | 15,000 | 165,000 |
| Free cash flow |  | $(145,000) |

4. The relatively small amount of net cash provided by operating activities during the year was largely the result of a large increase in accounts receivable. (The large increase in inventory was offset by a large increase in accounts payable.) Most of the cash that was provided by operating activities was paid out in dividends. The small amount that remained, combined with the cash provided by the issue of bonds and the issue of common stock, was insufficient to purchase a large amount of equipment and make a loan to another company. As a result, the cash on hand declined sharply during the year.

**Problem 14-11** (45 minutes)

To begin the problem, fill in the question mark pertaining to item “a” using the following T-account:

|  |  |  |  |
| --- | --- | --- | --- |
| Retained Earnings | | | |
| Dividends | 20,000 | Net income | 70,000 |
|  |  | Change | 50,000 |

The change in the retained earnings balance is $50,000 and the cash dividends are $20,000; therefore, the net income must be $70,000.

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$675,000 – $37,000 + Credits = $680,000

Credits = $680,000 – $675,000 + $37,000

Credits = $42,000

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 110,000 |  |
| Inventory |  | + 65,000 |
| Prepaid expenses |  | + 8,000 |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 32,000 |  |
| Accrued liabilities |  | – 9,000 |
| Income taxes payable | + 16,000 |  |

**Problem 14-11** (continued)

Step 3: The company had a $2,000 gain on the sale of equipment. The book value of the equipment was $13,000 (= $50,000 – $37,000). The company sold the equipment for $15,000, so its gain on the sale of $2,000 (= $15,000 – $13,000) is subtracted from net income.

The net cash provided by operating activities can now be calculated as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $ 70,000 |
| Adjustments to convert net income to cash basis: | |  |
| Depreciation | $  42,000 |  |
| Increase in accounts receivable | (110,000) |  |
| Decrease in inventory | 65,000 |  |
| Decrease in prepaid expenses | 8,000 |  |
| Increase in accounts payable | 32,000 |  |
| Decrease in accrued liabilities | (9,000) |  |
| Increase in income taxes payable | 16,000 |  |
| Gain on sale of equipment | (2,000) | 42,000 |
| Net cash provided by operating activities |  | $112,000 |
|  |  |  |

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Increase in Account Balance* | | *Decrease in Account Balance* |
| **Noncurrent Assets** |  | |  |
| Plant and equipment | – 220,000 | |  |
| Long-term investments | – 80,000 | |  |
| Long-term loans to subsidiaries |  | | + 30,000 |
|  |  | |  |
| **Liabilities and Stockholders’ Equity** |  | |  |
| Bonds payable | + 400,000 | |  |
| Common stock |  | * 170,000 | |

**Problem 14-11** (continued)

As stated in item “f” in the problem, it is reasonable to assume that the $80,000 increase in long-term investments corresponds with a cash outflow that needs to be recorded in the investing section of the statement. The $30,000 repayment of loan received from a subsidiary corresponds with a cash inflow that needs to be recorded in the investing section of the statement. The increase in bonds payable (+400,000) represents a cash inflow that needs to be recorded in the financing section of the statement. The $170,000 decrease in common stock represents a stock repurchase that needs to be recorded as a cash outflow in the financing section of the statement. The dividend of $20,000 is given in the problem; therefore, property, plant, and equipment is the only account that requires further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$1,580,000 + Debits – $50,000 = $1,800,000

Debits = $1,800,000 – $1,580,000 + $50,000

Debits = $270,000

The additions to property, plant, and equipment ($270,000) are recorded as a cash outflow and the proceeds from the sale of equipment ($15,000) are recorded as a cash inflow.

**Problem 14-11** (continued)

Given the amounts above, the statement of cash flows would be as follows:

|  |
| --- |
| Yoric Company |
| Statement of Cash Flows |
|  |

|  |  |  |
| --- | --- | --- |
| *Operating activities:* |  |  |
| Net income |  | $ 70,000 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $  42,000 |  |
| Increase in accounts receivable | (110,000) |  |
| Decrease in inventory | 65,000 |  |
| Decrease in prepaid expenses | 8,000 |  |
| Increase in accounts payable | 32,000 |  |
| Decrease in accrued liabilities | (9,000) |  |
| Increase in income taxes payable | 16,000 |  |
| Gain on sale of equipment | (2,000) | 42,000 |
| Net cash provided by operating activities |  | 112,000 |
|  |  |  |
| *Investing activities:* |  |  |
| Decrease in long-term loan to subsidiary | 30,000 |  |
| Proceeds from sale of equipment | 15,000 |  |
| Additions to long-term investments | (80,000) |  |
| Additions to plant and equipment | (270,000) |  |
| Net cash used in investing activities |  | (305,000) |
|  |  |  |
| *Financing activities:* |  |  |
| Issuance of bonds payable | 400,000 |  |
| Repurchase of common stock | (170,000) |  |
| Cash dividends | (20,000) |  |
| Net cash provided by financing activities |  | 210,000 |
|  |  |  |
| Net increase in cash |  | 17,000 |
| Beginning cash and cash equivalents |  | 23,000 |
| Ending cash and cash equivalents |  | $ 40,000 |

**Problem 14-12** (45 minutes)

1 Prepare a statement of cash flows (all numbers in millions).

Operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$641 – $8 + Credits = $765

Credits = $765 – $641 + $8

Credits = $132

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 65 |  |
| Inventory | – 45 |  |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 95 |  |
| Accrued liabilities | + 25 |  |
| Income taxes payable | + 6 |  |

Step 3: The gain on sale of equipment ($3) is subtracted from net income.

**Problem 14-12** (continued)

As an intermediate step, the net cash provided by operating activities can now be calculated as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $115 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $132 |  |
| Increase in accounts receivable | (65) |  |
| Increase in inventory | (45) |  |
| Increase in accounts payable | 95 |  |
| Increase in accrued liabilities | 25 |  |
| Increase in income taxes payable | 6 |  |
| Gain on sale of equipment | (3) | 145 |
| Net cash provided by operating activities |  | $260 |
|  |  |  |

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | – 49 |  |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable |  | – 170 |

**Problem 14-12** (continued)

Burgess did not issue any bonds during the year; therefore, the amount in the table on the prior page (–170) represents a cash outflow pertaining to a bond retirement. Property, plant, and equipment and retained earnings require further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$1,466 + Debits – $13 = $1,515

Debits = $1,515 – $1,466 + $13

Debits = $62

The additions to property, plant, and equipment ($62) are recorded as a cash outflow and the proceeds from the sale of equipment ($8) are recorded as a cash inflow.

Retained earnings:

Beginning balance – Debits + Credits = Ending balance

$928 – Debits + $115 = $977

$1,043 = $977 + Debits

Debits = $66

The dividend payment ($66) should be recorded as a cash outflow in the financing activities section of the statement.

**Problem 14-12** (continued)

|  |  |
| --- | --- |
|  | Burgess Company |
|  | Statement of Cash Flows |
|  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Operating activities:* |  | |  | | |
|  | Net income |  | | $ 115 | | |
|  | Adjustments to convert net income to cash basis: |  | |  | | |
|  | Depreciation | $132 | |  | | |
|  | Increase in accounts receivable | (65) | |  | | |
|  | Increase in inventory | (45) | |  | | |
|  | Increase in accounts payable | 95 | |  | | |
|  | Increase in accrued liabilities | 25 |  | | | |
|  | Increase in income taxes payable | 6 | |  | | |
|  | Gain on sale of equipment | (3) | | 145 | |
|  | Net cash provided by operating activities |  | | 260 | | |
|  |  |  | |  | | |
|  | *Investing activities:* |  | |  | | |
|  | Proceeds from sale of equipment | 8 | |  | | |
|  | Additions to plant and equipment | (62) | |  | | |
|  | Net cash used in investing activities |  | | (54) | | |
|  |  |  | |  | | |
|  | *Financing activities:* |  | |  | | |
|  | Retirement of bonds payable | (170) | | |  | |
|  | Cash dividends | (66) | |  | | |
|  | Net cash used in financing activities |  | | (236) | | | |
|  |  |  | |  | | |
|  | Net decrease in cash |  | | (30) | | |
|  | Beginning cash and cash equivalents |  | | 79 | | |
|  | Ending cash and cash equivalents |  | | $  49 | | |
|  |  |  | |  | | |

2. Burgess’s net income decreased by $20 million; however, its net cash provided by operating activities increased by $110 million over the prior year. When net income and net cash provided by operating activities move in opposite directions it warrants further inquiry. It appears that Burgess has inflated its net cash provided by operating activities by delaying payments to suppliers (see $95 million increase related to Accounts Payable). The company’s accounts receivable balance has increased substantially (+65 million) even though sales have declined.

**Problem 14-12** (continued)

This suggests that Burgess may be inflating its net income by failing to record a growing amount of uncollectible accounts. The company’s inventory has increased (+45 million) even though sales have declined. This suggests that Burgess may be inefficiently managing its inventory. The company’s depreciation ($132 million) is much larger than its additions to property, plant, and equipment ($62 million). This suggests that the company is not making sufficient investments to maintain its noncurrent assets.

Burgess’s free cash flow is $132 (= $260 – $62 – $66); however, a skeptic would emphasize that this figure may be artificially inflated because of the huge increase in accounts payable and the insufficient investment in property, plant, and equipment.

**Problem 14-13** (45 minutes)

1. Net cash provided by operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$50,000 – $10,000 + Credits = $60,000

Credits = $60,000 – $50,000 + $10,000

Credits = $20,000

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 40,000 |  |
| Inventory | – 50,000 |  |
| Prepaid expenses |  | + 4,000 |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | +63,000 |  |
| Accrued liabilities |  | – 9,000 |
| Income taxes payable | + 8,000 |  |

Step 3: The gain on sale of investments ($10,000) is subtracted from net income. The loss on sale of equipment ($2,000) is added to net income.

**Problem 14-13** (continued)

The net cash provided by operating activities can now be calculated as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $30,000 |
| Adjustments to convert net income to cash basis: | |  |
| Depreciation | $20,000 |  |
| Increase in accounts receivable | (40,000) |  |
| Increase in inventory | (50,000) |  |
| Decrease in prepaid expenses | 4,000 |  |
| Increase in accounts payable | 63,000 |  |
| Decrease in accrued liabilities | (9,000) |  |
| Increase in income taxes payable | 8,000 |  |
| Loss on sale of equipment | 2,000 |  |
| Gain on sale of investments | (10,000) | (12,000) |
| Net cash provided by operating activities |  | $18,000 |
|  |  |  |

2. Prepare a statement of cash flows.

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | – 130,000 |  |
| Long-term investments |  | + 20,000 |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable | + 70,000 |  |
| Common stock | +20,000 |  |

**Problem 14-13** (continued)

The decrease in the long-term investments account ($20,000) equals the cost of the long-term investment sold; therefore, Rusco did not purchase any long-term investments during the year. The proceeds from the sale of the long-term investment ($30,000) should be recorded as a cash inflow in the investing activities section of the statement.

The company did not retire any bonds during the year, so the amount on the prior page (+70,000) represents a cash inflow from a bond issuance. The company did not repurchase any of its own stock, so the amount on the prior page (+20,000) represents a cash inflow from issuing common stock. Property, plant, and equipment and retained earnings require further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$300,000 + Debits – $20,000 = $430,000

Debits = $430,000 – $300,000 + $20,000

Debits = $150,000

The additions to property, plant, and equipment ($150,000) are recorded as a cash outflow and the proceeds from the sale of equipment ($8,000) are recorded as a cash inflow.

Retained earnings:

Beginning balance – Debits + Credits = Ending balance

$85,000 – Debits + $30,000 = $106,000

$115,000 = $106,000 + Debits

Debits = $9,000

The dividend payment ($9,000) should be recorded as a cash outflow in the financing activities section of the statement.

**Problem 14-13** (continued)

|  |  |
| --- | --- |
|  | Rusco Company |
|  | Statement of Cash Flows |
|  | For the Year Ended July 31, 2014 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Operating activities:* |  |  |
|  | Net income |  | $ 30,000 |
|  | Adjustments to convert net income to cash basis: |  |  |
|  | Depreciation | $ 20,000 |  |
|  | Increase in accounts receivable | (40,000) |  |
|  | Increase in inventory | (50,000) |  |
|  | Decrease in prepaid expenses | 4,000 |  |
|  | Increase in accounts payable | 63,000 |  |
|  | Decrease in accrued liabilities | (9,000) |  |
|  | Increase in income taxes payable | 8,000 |  |
|  | Loss on sale of equipment | 2,000 |  |
|  | Gain on sale of investments | (10,000) | (12,000) |
|  | Net cash provided by operating activities |  | 18,000 |
|  |  |  |  |
|  | *Investing activities:* |  |  |
|  | Proceeds from sale of long-term investments | 30,000 |  |
|  | Proceeds from sale of equipment | 8,000 |  |
|  | Additions to plant and equipment | (150,000) |  |
|  | Net cash used in investing activities |  | (112,000) |
|  |  |  |  |
|  | *Financing activities:* |  |  |
|  | Issuance of bonds payable | 70,000 |  |
|  | Issuance of common stock | 20,000 |  |
|  | Cash dividends | (9,000) |  |
|  | Net cash provided by financing activities |  | 81,000 |
|  |  |  |  |
|  | Net decrease in cash |  | (13,000) |
|  | Beginning cash and cash equivalents |  | 21,000 |
|  | Ending cash and cash equivalents |  | $ 8,000 |
|  |  |  |  |

**Problem 14-13** (continued)

3. Free cash flow computation:

|  |  |  |
| --- | --- | --- |
| Net cash provided by operating activities |  | $   18,000 |
| Capital expenditures | $150,000 |  |
| Dividends | 9,000 | 159,000 |
| Free cash flow |  | $(141,000) |

4. Although the company reported $30,000 of net income for the year, a smaller amount of cash was provided by operating activities ($18,000) due to increases in accounts receivable and inventory. The cash provided by operations, when added to the cash provided by the sale of investments, the issue of bonds, and the sale of common stock, was not sufficient to cover the purchase of plant and equipment during the year. Note that the company increased its investment in plant and equipment by almost 50%. More care should have been taken in planning for this major investment in plant assets. Also, the company should get better control over its accounts receivable and inventory.

**Problem 14-14** (45 minutes)

1. Prepare a statement of cash flows.

Operating activities:

Step 1: The following equation can be applied to the Accumulated Depreciation account to compute the depreciation to add back to net income:

Beginning balance – Debits + Credits = Ending balance

$755,000 – $40,000 + Credits = $810,000

Credits = $810,000 – $755,000 + $40,000

Credits = $95,000

Step 2: The guidelines from Exhibit 14-2 can be used to analyze the changes in noncash balance sheet accounts that impact net income as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Current Assets** |  |  |
| Accounts receivable | – 180,000 |  |
| Inventory |  | + 12,000 |
| Prepaid expenses | – 5,000 |  |
|  |  |  |
| **Current Liabilities** |  |  |
| Accounts payable | + 300,000 |  |
| Accrued liabilities |  | – 17,000 |
| Income taxes payable | + 15,000 |  |

Step 3: The gain on sale of investments ($60,000) is subtracted from net income. The loss on sale of equipment ($20,000) is added to net income.

**Problem 14-14** (continued)

The net cash provided by operating activities can now be calculated as follows:

|  |  |  |
| --- | --- | --- |
| Net income |  | $170,000 |
| Adjustments to convert net income to cash basis: | |  |
| Depreciation | $ 95,000 |  |
| Increase in accounts receivable | (180,000) |  |
| Decrease in inventory | 12,000 |  |
| Increase in prepaid expenses | (5,000) |  |
| Increase in accounts payable | 300,000 |  |
| Decrease in accrued liabilities | (17,000) |  |
| Increase in income taxes payable | 15,000 |  |
| Loss on sale of equipment | 20,000 |  |
| Gain on sale of investments | (60,000) | 180,000 |
| Net cash provided by operating activities |  | $350,000 |
|  |  |  |

Investing and Financing activities:

The guidelines from Exhibit 14-3 can be used to analyze the changes in noncash balance sheet accounts that impact investing and financing cash flows as follows:

|  |  |  |
| --- | --- | --- |
|  | *Increase in Account Balance* | *Decrease in Account Balance* |
| **Noncurrent Assets** |  |  |
| Property, plant, and equipment | – 570,000 |  |
| Long-term investments |  | + 50,000 |
| Long-term loans to subsidiaries | – 44,000 |  |
|  |  |  |
| **Liabilities and Stockholders’ Equity** |  |  |
| Bonds payable | + 220,000 |  |
| Common stock | + 90,000 |  |

The decrease in the long-term investments account ($50,000) equals the cost of the long-term investment sold; therefore, Lomax did not purchase any long-term investments during the year. The proceeds from the sale of the long-term investment ($110,000) should be recorded as a cash inflow in the investing activities section of the statement.

**Problem 14-14** (continued)

Lomax’s subsidiaries did not repay any loans during the year, therefore, the amount in the table on the prior page (– 44,000) represents a cash outflow pertaining to a new loan. The company did not repurchase any of its own stock, so the amount on the prior page represents a $90,000 cash inflow related to a stock issuance. Property, plant, and equipment, bonds payable, and retained earnings require further analysis as follows:

Property, plant, and equipment:

Beginning balance + Debits – Credits = Ending balance

$2,600,000 + Debits – $130,000 = $3,170,000

Debits = $3,170,000 – $2,600,000 + $130,000

Debits = $700,000

The additions to property, plant, and equipment ($700,000) are recorded as a cash outflow and the proceeds from the sale of equipment ($70,000) are recorded as a cash inflow.

Bonds Payable:

Beginning balance – Debits + Credits = Ending balance

$600,000 – 350,000 + Credits = $820,000

Credits = $820,000 – $600,000 + 350,000

Credits = $570,000

Retained earnings:

Beginning balance – Debits + Credits = Ending balance

$478,000 – Debits + $170,000 = $573,000

$648,000 = $573,000 + Debits

Debits = $75,000

The dividend payment ($75,000) should be recorded as a cash outflow in the financing activities section of the statement.

**Problem 14-14** (continued)

|  |  |
| --- | --- |
|  | Lomax Company |
|  | Statement of Cash Flows |
|  |  |

|  |  |  |
| --- | --- | --- |
| *Operating activities:* |  |  |
| Net income |  | $170,000 |
| Adjustments to convert net income to cash basis: |  |  |
| Depreciation | $ 95,000 |  |
| Increase in accounts receivable | (180,000) |  |
| Decrease in inventory | 12,000 |  |
| Increase in prepaid expenses | (5,000) |  |
| Increase in accounts payable | 300,000 |  |
| Decrease in accrued liabilities | (17,000) |  |
| Increase in income taxes payable | 15,000 |  |
| Loss on sale of equipment | 20,000 |  |
| Gain on sale of investments | (60,000) | 180,000 |
| Net cash provided by operating activities |  | 350,000 |
|  |  |  |
| *Investing activities:* |  |  |
| Proceeds from sale of long-term investments | 110,000 |  |
| Proceeds from sale of equipment | 70,000 |  |
| Loans to subsidiaries | (44,000) |  |
| Additions to plant and equipment | (700,000) |  |
| Net cash used in investing activities |  | (564,000) |
| *Financing activities:* |  |  |
| Issuance of bonds payable | 570,000 |  |
| Issuance of common stock | 90,000 |  |
| Retirement of bonds payable | (350,000) |  |
| Cash dividends to stockholders | (75,000) |  |
| Net cash provided by financing activities |  | 235,000 |
|  |  |  |
| Net increase in cash and cash equivalents |  | 21,000 |
| Beginning cash and cash equivalents |  | 40,000 |
| Ending cash and cash equivalents |  | $ 61,000 |
|  |  |  |

**Problem 14-14** (continued)

2. The large amount of cash provided by operating activities is traceable for the most part to the $300,000 increase in accounts payable. If the accounts payable had remained basically unchanged, the same as inventory, then operating activities would have provided very little cash and the company might have experienced serious cash problems.

Note particularly that the cash provided by operating activities was used to purchase plant and equipment. Thus, the company is using cash derived from a short-term source (buildup of accounts payable) to finance long-term asset acquisitions. In short, although the company is generating substantial cash from operating activities, the *quality* of this source is open to question.

Also, note the substantial increase in accounts receivable. Apparently, the company’s collections from customers are lagging, perhaps because of sales to customers whose credit is weak. This may be the result of trying to increase sales so fast that proper credit checks are not being made. Again, this can lead to serious cash problems if the trend continues.

In the company’s financing activities, it appears that long-term debt sources, rather than equity sources, are being used to provide for expansion. Although companies frequently use debt to finance expansion, the level of debt in this company is increasing rapidly. (See Chapter 15 for a discussion of the Debt-to-Equity ratio and other financial ratios.)

Appendix 14A

The Direct Method of Determining the Net Cash Provided by Operating Activities

**Exercise 14A-1** (15 minutes)

|  |  |  |
| --- | --- | --- |
| Sales | $700 |  |
| Adjustments to a cash basis: |  |  |
| Increase in accounts receivable | – 110 | $590 |
|  |  |  |
| Cost of goods sold | 400 |  |
| Adjustments to a cash basis: |  |  |
| Decrease in inventory | – 70 |  |
| Increase in accounts payable | – 35 | 295 |
|  |  |  |
| Selling and administrative expenses | 184 |  |
| Adjustments to a cash basis: |  |  |
| Increase in prepaid expenses | + 9 |  |
| Decrease in accrued liabilities | + 4 |  |
| Depreciation charges | – 60 | 137 |
|  |  |  |
| Income tax expense | 36 |  |
| Adjustments to a cash basis: |  |  |
| Increase in income taxes payable | – 8 | 28 |
|  |  |  |
| Net cash provided by operating activities |  | $130 |

Note that the $130 “net cash provided” figure agrees with the indirect method presented in Exercise 14-4.

**Exercise 14A-2** (15 minutes)

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Sales | $150,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in accounts receivable | – 10,000 | $140,000 |
|  |  |  |  |
|  | Cost of goods sold | 90,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in inventory | + 9,000 |  |
|  | Increase in accounts payable | – 7,000 | 92,000 |
|  |  |  |  |
|  | Selling and administrative expenses | 40,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in prepaid expenses | + 2,000 |  |
|  | Decrease in accrued liabilities | + 3,000 |  |
|  | Depreciation charges | – 7,500 | 37,500 |
|  |  |  |  |
|  | Income taxes | 8,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Decrease in income taxes payable | + 500 | 8,500 |
|  |  |  |  |
|  | Net cash provided by operating activities |  | $ 2,000 |

2. Gains and losses on the sale of assets would have no effect on the computations in (1). The reason is that these items are not part of sales, cost of goods sold, selling and administrative expenses, or income taxes. Thus, gains and losses on the income statement are ignored under the direct method.

**Exercise 14A-3** (15 minutes)

|  |  |  |
| --- | --- | --- |
| Sales | $275 |  |
| Adjustments to a cash basis: |  |  |
| Decrease in accounts receivable | +  2 | $277 |
|  |  |  |
| Cost of goods sold | 150 |  |
| Adjustments to a cash basis: |  |  |
| Increase in inventory | + 10 |  |
| Increase in accounts payable | –  4 | 156 |
|  |  |  |
| Selling and administrative expenses | 90 |  |
| Adjustments to a cash basis: |  |  |
| Depreciation charges | – 15 | 75 |
|  |  |  |
| Net cash provided by operating activities |  | $ 46 |

**Exercise 14A-4** (15 minutes)

|  |  |  |
| --- | --- | --- |
| Sales | $ 350,000 |  |
| Adjustments to a cash basis: |  |  |
| Less increase in accounts receivable | – 19,000 | $331,000 |
|  |  |  |
| Cost of goods sold | 140,000 |  |
| Adjustments to a cash basis: |  |  |
| Plus increase in inventory | + 33,000 |  |
| Less increase in accounts payable | – 15,000 | 158,000 |
|  |  |  |
| Selling and administrative expenses | 160,000 |  |
| Adjustments to a cash basis: |  |  |
| Less decrease in prepaid expenses | –  1,000 |  |
| Plus decrease in accrued liabilities | +  2,000 |  |
| Less depreciation charges | – 20,000 | 141,000 |
|  |  |  |
| Income taxes | 15,000 |  |
| Adjustments to a cash basis: |  |  |
| Less increase in income taxes payable | –  4,000 | 11,000 |
|  |  |  |
| Net cash provided by operating activities |  | $ 21,000 |

Note that the $21,000 above agrees with the amount provided by operating activities under the indirect method in Exercise 14-2.

**Problem 14A-5** (45 minutes)

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | The income statement adjusted to a cash basis: | | |
|  | Sales | $500,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in accounts receivable | – 40,000 | $460,000 |
|  |  |  |  |
|  | Cost of goods sold | 300,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in inventory | + 50,000 |  |
|  | Increase in accounts payable | – 63,000 | 287,000 |
|  |  |  |  |
|  | Selling and administrative expenses | 158,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Decrease in prepaid expenses | – 4,000 |  |
|  | Decrease in accrued liabilities | + 9,000 |  |
|  | Depreciation charges | – 20,000 | 143,000 |
|  |  |  |  |
|  | Income taxes | 20,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in income taxes payable | – 8,000 | 12,000 |
|  |  |  |  |
|  | Net cash provided by operating activities |  | $ 18,000 |

**Problem 14A-5** (continued)

|  |  |  |  |
| --- | --- | --- | --- |
| 2. | Rusco Company | | |
|  | Statement of Cash Flows | | |
|  | For the Year Ended July 31, 2014 | | |
|  | *Operating activities:* |  |  | |
|  | Cash received from customers |  | $460,000 | |
|  | Less cash disbursements for: |  |  | |
|  | Cost of merchandise purchased | $287,000 |  | |
|  | Selling and administrative expenses | 143,000 |  | |
|  | Income taxes | 12,000 |  | |
|  | Total cash disbursements |  | 442,000 | |
|  | Net cash provided by operating activities |  | 18,000 | |
|  |  |  |  | |
|  | *Investing activities:* |  |  | |
|  | Proceeds from sale of investments | 30,000 |  | |
|  | Proceeds from sale of equipment | 8,000 |  | |
|  | Additions to plant and equipment | (150,000) |  | |
|  | Net cash used for investing activities |  | (112,000) | |
|  |  |  |  | |
|  | *Financing activities:* |  |  | |
|  | Increase in bonds payable | 70,000 |  | |
|  | Increase in common stock | 20,000 |  | |
|  | Cash dividends | (9,000) |  | |
|  | Net cash provided by financing activities |  | 81,000 | |
|  |  |  |  | |
|  | Net decrease in cash |  | (13,000) | |
|  | Beginning cash and cash equivalents |  | 21,000 | |
|  | Ending cash and cash equivalents |  | $  8,000 | |
|  |  |  |  | |

**Problem 14A-5** (continued)

3. There are two reasons for the sharp decline in cash. First, note that a relatively small amount of cash was provided by operations during the year. This is due to a build-up in accounts receivable and inventory, which together have grown by $90,000; the build-up of receivables reduced the amount of cash received from customers, and the build-up of inventory increased the amount of cash required to purchase goods.

Second, the company paid out in dividends half of the cash provided by operations, while at the same time increasing its investment in plant and equipment by almost 50%. These uses of cash far outstripped the amount of cash available through operations and the sale of bonds, common stock, and investments, resulting in a sharp decrease in the amount of cash available.

**Problem 14A-6** (30 minutes)

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Sales | $800 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in accounts receivable | – 100 | $700 |
|  |  |  |  |
|  | Cost of goods sold | 500 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Decrease in inventory | – 50 |  |
|  | Increase in accounts payable | – 80 | 370 |
|  |  |  |  |
|  | Selling and administrative expenses | 213 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in prepaid expenses | + 4 |  |
|  | Decrease in accrued liabilities | + 12 |  |
|  | Depreciation charges | – 24 | 205 |
|  |  |  |  |
|  | Income taxes | 27 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in income taxes payable | – 6 | 21 |
|  |  |  |  |
|  | Net cash provided by operating activities |  | $104 |

**Problem 14A-6** (continued)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2. | | Weaver Company | | |
|  | | Statement of Cash Flows | | |
|  | | For the Year Ended December 31, 2014 | | |
|  | *Operating activities:* |  |  |
|  | Cash received from customers |  | $700 |
|  | Less cash disbursements for: |  |  |
|  | Cost of merchandise purchased | $370 |  |
|  | Selling and administrative expenses | 205 |  |
|  | Income taxes | 21 |  |
|  | Total cash disbursements |  | 596 |
|  | Net cash provided by operating activities |  | 104 |
|  |  |  |  |
|  | *Investing activities:* |  |  |
|  | Proceeds from sale of long-term investments | 10 |  |
|  | Proceeds from sale of equipment | 20 |  |
|  | Additions to plant and equipment | (180) |  |
|  | Net cash used for investing activities |  | (150) |
|  |  |  |  |
|  | *Financing activities:* |  |  |
|  | Increase in bonds payable | 110 |  |
|  | Decrease in common stock | (40) |  |
|  | Cash dividends | (30) |  |
|  | Net cash provided by financing activities |  | 40 |
|  |  |  |  |
|  | Net decrease in cash |  | (6) |
|  | Beginning cash and cash equivalents |  | 15 |
|  | Ending cash and cash equivalents |  | $  9 |

**Problem 14A-7** (45 minutes)

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Sales | $900,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in accounts receivable | – 80,000 | $820,000 |
|  |  |  |  |
|  | Cost of goods sold | 500,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in inventory | + 50,000 |  |
|  | Increase in accounts payable | – 60,000 | 490,000 |
|  |  |  |  |
|  | Selling and administrative expenses | 328,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Decrease in prepaid expenses | – 7,000 |  |
|  | Decrease in accrued liabilities | + 10,000 |  |
|  | Depreciation charges | – 42,000 | 289,000 |
|  |  |  |  |
|  | Income taxes | 24,000 |  |
|  | Adjustments to a cash basis: |  |  |
|  | Increase in income taxes payable | – 3,000 | 21,000 |
|  |  |  |  |
|  | Net cash provided by operating activities |  | $ 20,000 |

**Problem 14A-7** (continued)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2. | | Joyner Company | | |
|  | | Statement of Cash Flows | | |
|  | | For Year 2 | | |
|  | *Operating activities:* |  |  |
|  | Cash received from customers |  | $820,000 |
|  | Less cash disbursements for: |  |  |
|  | Cost of merchandise purchased | $490,000 |  |
|  | Selling and administrative expenses | 289,000 |  |
|  | Income taxes | 21,000 |  |
|  | Total cash disbursements |  | 800,000 |
|  | Net cash provided by operating activities |  | 20,000 |
|  |  |  |  |
|  | *Investing activities:* |  |  |
|  | Proceeds from sale of equipment | 18,000 |  |
|  | Loan to Hymans Company | (40,000) |  |
|  | Additions to plant and equipment | (150,000) |  |
|  | Net cash used for investing activities |  | (172,000) |
|  |  |  |  |
|  | *Financing activities:* |  |  |
|  | Increase in bonds payable | 120,000 |  |
|  | Increase in common stock | 30,000 |  |
|  | Cash dividends | (15,000) |  |
|  | Net cash provided by financing activities |  | 135,000 |
|  |  |  |  |
|  | Net decrease in cash |  | (17,000) |
|  | Beginning cash and cash equivalents |  | 21,000 |
|  | Ending cash and cash equivalents |  | $  4,000 |

3. The decline in cash is explainable largely by the company’s inability to generate a significant amount of cash from operating activities. Note that the company generated only $20,000 from operating activities, although net income was $56,000 for the year. This small amount of cash generated is due primarily to the buildup of accounts receivable. Even though an additional $150,000 was obtained from an issue of bonds and an issue of common stock ($120,000 + $30,000 = $150,000), the cash available was not sufficient to expand the plant, make a substantial loan to another company, and pay a large cash dividend. As a result, cash declined during the year.