

# Chapter 6

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## Accounting Information Systems

### T Questions

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- The four criteria for an effective accounting system are:
  - The extent to which the system helps *control* operations
  - The system's *compatibility*, or ability to work smoothly with the business's particular structure
  - The system's *flexibility*, or ability to adjust to changes in the business's structure
  - A *cost/benefit relationship* such that its benefits in terms of information provided exceed the costs of the system.
- In *batch processing*, transaction inputs of a given type are entered as a group, with posting coming later. In an *on-line processing* system, transactions can be posted continuously as transactions are being recorded.
- 1 = Assets, 2 = Liabilities, 3 = Owner's Equity, 4 = Revenues, 5 = Expenses
- The number 112 could be assigned to Accounts Receivable on the basis of the following reasoning: 1 denotes Assets; 11 refers to Current Assets. If the number 111 is assigned to Cash, then 112 logically goes to Accounts Receivable. Add more digits to 112, and you signify individual customer receivables. Therefore the number 1120708 would apply to an individual customer account receivable.
- Menus* organize the access paths to different accounting functions in a computerized accounting system. Menu structures differ from system to system.
- Formulas in spreadsheets allow changes in individual amounts to be taken into account automatically, when their sums (or differences, products, or quotients) are calculated. In a budget, a particular department's expenses might change and affect perhaps dozens of related totals. The computer can perform the necessary changes faster and more accurately than people doing manual recalculation.
- Four special journals and the transactions they are designed to account for are the sales journal (sales on account), the cash receipts journal (cash receipts), the purchases journal (purchases on account), and the cash payments journal (cash payments).
- Special journals result in *less work*. Their column headings identify the accounts to be debited and credited, so it is not necessary to print each account title for every entry. Also, explanations for entries are not needed. The nature of the entry is identified by the special journal in which it is recorded.

Another advantage of special journals is *streamlined posting*. Column totals may be posted instead of each transaction's debit and credit.
- A control account is kept in the general ledger. It is backed up with a subsidiary ledger of individual accounts. Two common control accounts are Accounts Receivable and Accounts Payable.
- Eighty-eight postings appear in this sales journal: 86 postings to the individual customer accounts in the accounts receivable subsidiary ledger, one posting of the total amount to Accounts Receivable in the general ledger, and one posting of the total amount to Sales Revenue in the general ledger.

11. This error would be detected when the ledgers are balanced. The debit balance in Accounts Receivable will not agree with the sum of the balances of the individual customer accounts in the accounts receivable subsidiary ledger.
12. Individual debits and credits to the accounts receivable and accounts payable subsidiary ledgers are posted daily. Column totals are posted less frequently, often monthly.
13. Balancing the ledgers is a check of the accuracy of the accounting records, specifically the agreement between a subsidiary ledger and its control account in the general ledger.
14. No, this does *not* mean that the trial balance is out of balance. Lack of agreement between a subsidiary ledger and its control account may be due to an error that did not affect the general ledger, from which the trial balance is taken.

## T Daily Exercises

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(5 min.) **DE 6-1**

*Control* is the most important feature because a business must safeguard its assets.

*Favorable cost-benefit relationship* must be considered if financial resources are limited.

(5 min.) **DE 6-2**

- |             |   |
|-------------|---|
| A. Server   | <u>D</u> Electronic linkages that allow different computers to share the same information |
| B. Hardware | <u>B</u> Electronic equipment   |
| C. Software | <u>C</u> Programs that drive a computer   |
| D. Network  | <u>A</u> Main computer in a networked system  |

(5-10 min.) **DE 6-3**

				<sup>4</sup> H		<sup>5</sup> F	
				A		L	
		<sup>3</sup> S	E	R	V	E	R
		O		D		X	
<sup>1</sup> C		F		W			<sup>6</sup> C
O		T		A			R
<sup>2</sup> N	E	T	W	O	R	K	E
T			A		E		D
R			R				I
O	<sup>7</sup> B	E	N	E	F	I	T
L							S

(5 min.) **DE 6-5**

Formula for B4: = B2 ! B3

Row:	Column: A	B	C
1	Income Statement:		
2	Revenues	150,000	= B2* 1.15
3	Expenses	90,000	= B3* 1.10
4	Net Income	60,000	= C2 - C3
5			

Cursor is on cell B4

(5 min.) **DE 6-4**

Number	Account
11	Cash
12	Accounts receivable
13	Inventory
14	Prepaid insurance
15	Store fixtures
16	Accumulated depreciation
21	Accounts payable
22	Note payable, long-term
31	Madeline Jacobs, capital
32	Madeline Jacobs, withdrawals
41	Sales revenue
51	Cost of goods sold
52	Depreciation expense

(5 min.) **DE 6-6**

- J = General journal
- S = Sales journal
- CR = Cash receipts journal
- P = Purchases journal
- CP = Cash payments journal

Transactions:

- CP a. Cash purchase of inventory
- CR b. Collection of dividend revenue earned on an investment
- CP c. Prepayment of insurance
- CR d. Borrowing money on a long-term note payable
- P e. Purchase of equipment on account
- S f. Cost of goods sold along with a credit sale
- CR g. Cash sale of inventory
- CP h. Payment of rent
- J i. Depreciation of computer equipment
- P j. Purchases of inventory on account
- CR k. Collection of accounts receivable
- J l. Expiration of prepaid insurance
- S m. Sale on account
- CP n. Payment on account

(5 min.) **DE 6-7**

1. \$2,505 Sales revenue ..... \$ 4,319  
 Cost of goods sold..... (1,814)  
 Gross profit ..... \$ 2,505
2. \$4,319 Posted to Sales Revenue on *November 30*
3. \$ 907 Susan Levy account in the Accounts Receivable  
 Subsidiary Ledger
4. \$4,319 Accounts Receivable account in the General Ledger

(5 min.) **DE 6-8**

1. Accounts Receivable (control) account in the General Ledger.

**2. General Ledger**

Accounts Receivable debit balance.....	\$4,319 ←
 <b>From the Accounts Receivable Subsidiary Ledger</b>	
<u>Customer</u>	<u>Balance</u>
Maria Galvez .....	\$ 935
Brent Harmon .....	694
Susan Levy .....	907
Clay Schmidt .....	<u>1,783</u>
Total accounts receivable.....	<u>\$4,319</u> ←

3. Accounts Receivable Subsidiary Ledger

(5 min.) **DE 6-9**

1. \$3,172
2. \$1,000

To learn of payments on the loan, look in (a) Note Payable account in the general ledger, or (b) cash payments journal.

3. \$6,134
4. Cash collections on account:

Nov. 14 .....	\$ 900
22 .....	<u>300</u>
Total.....	1,200
Total discounts .....	<u>35</u>
Decrease in accounts receivable.....	<u>\$1,235</u>

(5-10 min.) **DE 6-10**

1. Austin Sound owes JVC \$451.  
In total, Austin Sound owes \$2,057 on account.
2.  $\$2,876 = (\$1,706 + \$103 + \$1,067)$
3. Total accounts payable paid off ..... \$ 819  
Less: Purchase discounts ..... (21)  
Total payments on account (\$679 + \$119)..... \$ 798

(10 min.) **DE 6-11**

1. The company must have paid one month's rent.
2. Total inventory purchases (\$1,706 + \$2,200)..... \$3,906 \*  
Less: Purchase discount ..... (21)\*  
Net inventory purchases..... \$3,885 \*

\*The Inventory account holds these amounts.

3. Ernest cannot take a purchase discount.  
  
Accounts Payable (Exhibit 6-13) ..... 2,057  
Cash ..... 2,057  
Paid on account.

(10 min.) **DE 6-12**

1. On account - journal reference P. 8 (purchases journal page 8)
2. City Office Supply Co.  
November 30 balance ..... \$ 543  
No discount because the credit purchases occurred on  
November 9 and 19 under terms of 2/10 n/30
3. Cash (Exhibit 6-13 of the text)..... \$1,875  
Inventory (Exhibit 6-11 of the text) ..... 364
4. Gross sales revenue ..... \$7,491 \*  
Less: Sales discounts ..... (35)\*  
Net sales revenue ..... \$7,456

\*General ledger

5. Cash receipt - journal reference CR. 5 (cash receipts journal page 5)

**T Exercises**

(10 min.) **E 6-5**

(10 min.) **E 6-1**

Accounts Receivable.....	121
Note Payable.....	281
Mark Lancaster, Capital.....	311
Mark Lancaster, Withdrawals.....	321
Depreciation Expense.....	531

Assets, Current Assets, and Revenues are headings and would not be assigned an account number.

(10 min.) **E 6-2**

*Total assets* = \$95,000 (\$31,600 + \$63,400)  
*Owner's equity* = \$13,600 (\$8,600 + \$2,000 + \$28,000 - \$21,000)  
*Total liabilities* = \$81,400 (\$95,000 - \$13,600)  
*Long-term liabilities* = \$40,300 (\$81,400 - \$41,100)

(5 min.) **E 6-3**

Annual depreciation = B9 / C3

(5 min.) **E 6-4**

- a. Current ratio: = B6 / C8
- b. Total owner's equity: = B14 - C13
- c. Debt ratio: = C13 / B14

DATE	DEBITS				CREDITS			COST OF GOODS SOLD DR. INVENTORY CR.
	CASH	SALES DISCOUNTS	ACCOUNTS RECEIVABLE	SALES REVENUE	OTHER ACCOUNTS			
					ACCOUNT TITLE	POST. REF.	AMOUNT	
May 16	911.40	18.60	930.00		L. Ewald	T		
19	676.20	13.80	690.00		E. Lovell	T		
24	300.00			300.00			190.00	
30	4,100.00		4,100.00		T. Ross	T		
31	<u>5,987.60</u>	<u>32.40</u>	<u>5,720.00</u>	<u>300.00</u>	Totals		190.00	
	6,020		6,020					

(5-10 min.) **E 6-6**

(10-15 min.) **E 6-8**

<i>Posting Reference</i>	<i>Actual Reference</i>
a.....	111
b.....	512
c.....	112
d.....	511
e.....	T
f.....	T
g.....	113
h.....	521
i.....	T
j.....	x

(5 min.) **E 6-7**

- Nov. 6 Sale on account to Jo Mei Chang.
- 14 Vitria Paint credited Chang's account. Either Chang returned merchandise to Vitria, or Vitria granted a sales allowance to Chang.
- 27 Cash receipt from Chang.

<b>Journal</b>				
DATE	ACCOUNTS AND EXPLANATIONS	POST. REF.	DEBIT	CREDIT
April 5	Supplies		1,106	
	Accounts Payable – Disch Corp.			1,106
	Purchased supplies on account.			
11	Inventory		3,600	
	Accounts Payable – Conn Corp.			3,600
	Purchased inventory on account.			
19	Equipment		14,300	
	Accounts Payable – Saturn Co.			14,300
	Purchased equipment on account.			
22	Inventory		2,210	
	Accounts Payable – Milan, Inc.			2,210
	Purchased inventory on account.			

Purchases Journal									
DATE	ACCOUNT CREDITED	TERMS	POST. REF.	CREDITS		DEBITS			
				ACCOUNTS PAYABLE	INVENTORY	SUPPLIES	OTHER ACCOUNTS		
							ACCOUNT TITLE	POST. REF.	AMOUNT
April	5	Disch Corp.		1,106		1,106			
	11	Conn Corp.		3,600	3,600				
	19	Saturn Co.		14,300		Equipment		14,300	
	22	Milan, Inc.		2,210	2,210				
	30	Totals		21,216	5,810	1,106			14,300

Recording the transactions in the purchases journal is quicker because it takes less writing.

*Req. 1 (posting to the general ledger)*

ACCOUNT		INVENTORY				
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	30		1,951		1,951	

ACCOUNT		SUPPLIES				
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	30		175		175	

ACCOUNT		EQUIPMENT				
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	26		916		916	

ACCOUNT		ACCOUNTS PAYABLE				
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	30			3,042		3,042

Req. 2 (posting to the accounts payable subsidiary ledger)

ACCOUNT FAVER EQUIPMENT COMPANY						
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	26	P.7		916		916

ACCOUNT LANCER TECHNOLOGIES						
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	2	P.7		800		800
	13	P.7		1,151		1,951

ACCOUNT SATURN OFFICE SUPPLY						
DATE	ITEM	JRNL. REF.	DEBIT	CREDIT	BALANCE	
					DEBIT	CREDIT
Sept.	5	P.7		175		175

Req. 3 (balancing the ledgers)

Credit balance from Accounts Payable control account in general ledger.....	<u>\$3,042</u>	←
Total of balances in accounts payable subsidiary ledger (\$916 + \$1,951 + \$175) .....	<u>\$3,042</u>	

Reqs. 1, 2, and 3

Cash Payments Journal					
DATE	ACCOUNT DEBITED	DEBITS		CREDITS	
		OTHER ACCOUNTS	ACCOUNTS PAYABLE	INVENTORY	CASH
Aug. 1	Rabin Associates		500	10	490
5	Inventory	4,300			4,300
9	Supplies	375			375
16	LaGrange Company		4,062		4,062
21	Furniture	960			960
26	VisioNet Software		4,000	90	3,910
30	Interest Expense	800			800
31	Totals	6,435	8,562	100	14,897
		14,997		14,997	

The August 15 purchase of inventory on credit should *not* be recorded in the cash payments journal. It belongs in the purchases journal.

(10-15 min.) **E 6-11**

BIWHEEL JOURNAL ENTRIES

SCHWINN JOURNAL ENTRIES

Journal					
DATE	ACCOUNT TITLE	DEBIT	CREDIT	ACCOUNT TITLE	CREDIT
May 14	Inventory	1,130		Accounts Receivable – BiWheel	1,130
	Accounts Payable – Schwinn		1,130	Sales Revenue	1,130
				Cost of Goods Sold	690
				Inventory	690
20	Accounts Payable – Schwinn	165		Sales Returns and Allowances	165
	Inventory		165	Accounts Receivable – BiWheel	165
				Inventory	80
				Cost of Goods Sold	80
21	Accounts Payable – Schwinn			Cash	946
	(\$1,130 ! \$165)	965		Sales Discounts	19
	Inventory (\$965 × .02)		19	Accounts Receivable – BiWheel	965
	Cash (\$965 ! \$19)		946		

**Challenge Exercise**

(15-20 min.) **E 6-12**

1. Net sales revenue		
Sales revenue (\$4,319 + \$3,172).....	\$7,491	
Less: Sales discounts .....	<u>(35)</u>	\$7,456
Cost of goods sold (\$1,814 + \$1,707).....		<u>3,521</u>
Gross profit.....		<u>\$3,935</u>
2. Cost of goods sold:		
Beginning inventory (assumed \$0) .....	\$ 0	
Net purchases (\$1,706 + \$2,200 ! \$21) .....	<u>3,885</u>	
Cost of goods available for sale .....		3,885
Less: Ending inventory (\$3,885 ! \$3,521)....		<u>(364)</u>
Cost of goods sold .....		<u>\$3,521</u>

Yes, the two cost-of-goods-sold computations agree.