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Section _____

**ACCOUNTING 15.511
SUMMER 2004
MIDTERM EXAM**

Exam Guidelines:

- You have 80 minutes to complete the exam. Please use your time efficiently and read the questions carefully.
- This exam contains 12 pages, including the cover page. Please make sure your copy is not missing any pages.
- If necessary, make assumptions to solve problems, and state your assumption clearly.

Good luck!

PROBLEM 1 (30 Minutes, 30 Marks)

CW Company engages in the following activities during Year 1:

1. January 1, Year 1: CW issues 10,000 shares of stock at \$20 par-value.
2. January 20, Year 1: CW purchases a building for \$50,000 and purchases equipment for \$20,000. It pays half the price in cash and the other half through a bank loan.
3. March 1, Year 1: CW acquires finished goods for \$20,000. CW pays cash for half of the merchandise, and the remainder is purchased on account.
4. March 30, Year 1: CW pays \$25,000 in employee salaries.
5. July 1, Year 1: CW decides to rent additional building space and pays for six months rent, at \$2000 a month, in advance.
6. August 22, Year 1: CW sells all of the finished goods for \$400,000, of which \$200,000 is on account and the remainder is received in cash. CW expects to collect 95% of its credit sales.

On the sales made on August 22, CW also offers certain services on the sold merchandise for the first three months. CW estimates these services to amount to \$5000.

7. October 30, Year 1: CW collects \$100,000 in cash from its accounts receivable, and uses this money to pay down its accounts payable.
8. November 23, Year 1: CW Company performs services on sold merchandise at cost of \$5000 to date.
9. December 30, Year 1: Depreciation for the year is \$2000 on the building and \$2400 on the equipment.
10. December 30, Year 1: CW pays \$250,000 in dividends.

A. Make entries to record the above transactions. You may use the Balance Sheet Equation or a journal entry.

1. Dr. Cash 200,000
Cr. Common Stock 200,000
2. Dr. PPE 70,000
Cr. Cash 35,000
Loan Payable 35,000
3. Dr. Inventory 20,000
Cr. Cash 10,000
Account Payable 10,000
4. Dr. Salary Expense 25,000
Cr. Cash 25,000
5. Dr. Prepaid Rent 12,000
Cr. Cash 12,000
6. Dr. Cash 200,000
Account Receivable 200,000
Cr. Sales Revenue 400,000

Dr. Cost of Goods Sold 20,000
Cr. Inventory 20,000

Dr. Bad Debt Expense 10,000
Cr. Allowance for doubtful accounts 10,000

Dr. Warranty Expense 5,000
Cr. Warranty Liability 5,000
7. Dr. Cash 100,000
Cr. Accounts Receivable 100,000

Dr. Accounts Payable 10,000
Cr. Cash 10,000
8. Dr. Warranty Liability 5,000
Cr. Cash 5,000
9. Dr. Depreciation Expense 4,400
Cr. Accumulated Depreciation 4,400
10. Dr. Dividends 250,000
Cr. Cash 250,000

B. Make necessary adjusting entries on December 31, Year 1.

The only adjusting entry is

Dr. Rent Expense 12,000
Cr. Prepaid Rent 12,000

PROBLEM 2 (5 minutes, 5 marks)

Answer ONE of the following two:

A. Why is conservatism important in accounting?

OR

B. Why is objectivity important in accounting?

A. Why is conservatism important in accounting?

- Accounting requires certain estimates and judgments. Conservatism improves the process of estimation by allowing accountants to assign values to certain transactions.
- Conservatism makes accounting numbers credible.
- Lenders bear the downside risk without upside potential; therefore, lenders would like to get the bad news more timely. Conservatism allows for this.
- Conservatism improves investor believability of public companies' financial statements.

B. Why is objectivity important in accounting?

- Information produced by managers alone is not believable. Outside investors demand independently audited financial information.
- Allows investors to better trust the information contained in the financial statements.
- Allows for consistency in financial information among the different firms. Analysts and investors can then compare various companies on the basis of their financial statements and forward estimates.
- Important for the auditors that review the financial statements.
- Establishes the internal control system through which transactions are properly authorized, reported, and recorded.

PROBLEM 3 (15 minutes, 15 marks)

The following is a comparative balance sheet for a company.

	12/31/03	12/31/02	Difference
<u>Assets:</u>			
Cash	40,500	13,000	27,500
Accounts receivable	27,000	45,750	(18,750)
Inventory	12,000	9,000	3,000
Long-term Investments	0	3,000	(3,000)
Buildings	15,000	29,750	(14,750)
Accumulated depreciation on buildings	(2,000)	(6,000)	4,000
Equipment	40,000	20,000	20,000
Accumulated depreciation on equipment	(2,000)	(4,500)	2,500
Patent	5,000	6,250	(1,250)
Total Assets	102,750	76,000	
<u>Liabilities and Owners' Equity:</u>			
Account payable	9,000	3,000	6,000
Taxes payable	9,000	10,000	(1,000)
Long-term debt	15,000	18,000	(3,000)
Common stock	50,000	40,000	10,000
Retained earnings	20,750	6,000	14,750
Total Liabilities and Equity	102,750	76,000	

For 2003, the company recorded net income of \$25,000.

A. What effect does the accounts receivable account have on cash flow from operating activities for 2003? (5 Marks)

+18,750

B. What effect does the taxes payable account have on cash flow from operating activities for 2003? (5 Marks)

-1,000

C. Are cash flows from investing activities positive or negative for 2003 and why? Assume no loss or gain has in the disposal of PP&E. (5 Marks) (This is difficult. Attempt to get the direction, positive or negative, by inspecting changes in the appropriate accounts from the balance sheet.)

Negative.

(A complete numeric answer would require detailed information on depreciation).

Net Buildings: $13,000 = 23,750 + \text{CAPEX} - \text{Depreciation} - \text{BV} (\text{Disposals})$

Net Equipment: $38,000 = 15,500 + \text{CAPEX} - \text{Depreciation} - \text{BV} (\text{Disposals})$

Patent: $5000 = 6250 + \text{Purchase} - \text{Amortization} - \text{Sale}$

Hence, to calculate CFI, one needs information on depreciation. Given that there are no gains made or losses incurred, a sum of CAPEX, BV (Disposals), Purchases, and Sales would yield CFI.

We can use the given information to determine that the CFI is negative. CAPEX on Equipment is at least 22,500. The net change in the Buildings and Patent account is at most 10,750 and 1250, respectively. Thus, the maximum proceeds of 12,000 are less than the lowest expenditure of 22,500.

D. [Extra Credit] What is the effect of dividends on cash flows from investing activities? (5 Marks)

None.

PROBLEM 4 (20 Minutes, 25 Marks) Financial Statement Analysis

For this financial data, please see the Income Statement, Balance Sheet, and Statement of Cash Flows (pp. 53-55) of:

Intel Corporation. "2002 Annual Report." 2003.

Available at: <http://www.intc.com> (accessed July 31, 2004).

Using the information for Intel, answer the following:

A. ROA can be defined as: $\text{ROA} = \text{Profit margin} \times \text{Asset Turnover}$

Calculate Intel's ROA, profit margin, and asset turnover for 2001 and 2002. For simplicity, ignore interest income and interest expense in your calculations.

$\text{ROA} = \text{NI}/(\text{Average Total Assets})$

2001: $1291/.5(44395 + 47945) = 2.8\%$

2002: $3117/.5(44395+44224) = 7\%$

$\text{Profit Margin} = \text{NI}/\text{Sales}$

2001: $1291/26539 = 4.9\%$

2002: $3117/26764 = 11.6\%$

$\text{Asset Turnover} = \text{Sales}/(\text{Average Total Assets})$

2001: $26539/.5(44395 + 47945) = 57\%$

2002: $26764/.5(44395 + 44224) = 60.4\%$

B. What is your inference from the trends in these ratios?

Intel improved both its profit margin and its asset turnover. As a result, Intel was able to generate a higher return on its total assets.

- C. For the years 2001 and 2002, calculate one ratio each year that is indicative of Intel's short-term liquidity. Briefly comment on Intel's liquidity.**

Current Ratio = (Current Assets)/(Current Liabilities)

2001: $17633/6570 = 2.68$

2002: $18925/6595 = 2.87$

Quick Ratio = (Cash + Marketable Sec. + Accounts Receivable)/(Current Liabilities)

2001: $(7970 + 2607)/6570 = 1.61$

2002: $(7404 + 2574)/6595 = 1.51$

Intel has very high liquidity.

- D. For 2002 calculate the Days Inventory held by Intel. What is the cost and/or risk of holding high inventory for Intel?**

Inventory Turnover = COGS/(Average Inventory) = $8650/.5(2276 + 2253) = 3.82$

Days Inventory Held = $365/(\text{Inventory Turnover}) = 365/3.82 = 95.6 \text{ days}$

The cost or risk associated with holding high inventory is that prices drop quickly, particularly in Intel's industry. There is also concern for the obsolescence of finished goods.

PROBLEM 5 (10 minutes, 15 marks)

The press release below was issued by Applied Industrial Technologies (NYSE: AIT) on January 17, 2002.

"Applied Industrial Technologies today reported that financial results for its second quarter ended December 31, 2001 were consistent with the company's guidance provided in a December 11, 2001 news release. The company has taken a charge of \$12,100,000, or \$0.63 per share, for impaired goodwill associated with its fluid power businesses. This non-cash charge is being recognized on the company's statement of consolidated income as the effect of a change in accounting principle related to Goodwill and Other Intangible Assets. This impairment within the fluid power businesses is primarily attributed to the downturn in the industrial economy in the years following the company's acquisitions. Regarding the goodwill impairment charge, Applied Chairman and Chief Executive Officer David L. Pugh commented, 'The charge was dictated by early adoption of a new accounting principle (SFAS 142). This new accounting standard requires goodwill and intangible assets with indefinite useful lives to no longer be amortized but instead be tested for impairment.' " - Press release courtesy of Applied Industrial Technologies

- A. What accounts would be affected as you record the goodwill impairment of \$12,100,000? Use the balance sheet equation below or make a journal entry.**

Assets = Liabilities + Contributed Capital + Retained Earnings

(12,100,000) (12,100,000)

or Dr. Goodwill impairment charge 12,100,000

Cr. Goodwill 12,100,000

B. What is the impact of the impairment loss on the operating cash flow for the firm?

Zero.

Net Income was lower by 12,100,000; but this non-cash charge was added back to Net Income to get CFO. Therefore, there is no cash impact from the impairment loss.

C. Why do you think managers emphasize that this is a “non-cash” charge?

Managers like to emphasize the non-cash aspect of this type of accounting entry to create the impression that the charge does not really affect the firm's valuation. However, the fact that goodwill is impaired does affect the firm's valuation. We should not forget that at some point in the past the company paid cash to acquire firms. The fact that the company paid more than the fair value of the assets of the target implies that the company thought the acquisition would create additional cash flows in the future. The impairment today indicates that the hopes of creating additional cash flows have disappeared. So clearly, that affects how we view the future cash flow of the firm.