2.96/2.961 Management for Engineers

Fall 2011

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Accounting Quiz

October 31, 2011

- **DO NOT OPEN this quiz until instructed to do so**
- **This quiz is CLOSED BOOK**
- **Put your name on top of every page—these pages may be separated for grading**
- **Write your solutions in the space provided. Should you need extra space, write in the back of the page with the problem.**
- **Blue books will be provided for your own use but will not be graded.**
- **Be neat and write legibly.**

Fill in your name and the names of the people sitting next to you. If you are at the end of a row write "X" in the space provided.

Your name:	
Name of person to your left:	
Name of person to your right:	

Problem	Grade	Points
1		20
2		40
3		25
4		15
5		5
Total		105

Question 1: Financial Interpolation (20 points)

Complete the missing values from (a) to (i) in the chart below. Show your calculations (write an equation and solve it). Note that the first year of operations is 2009.
Answers without calculations will not get credit.

If you can't find the value for A please use the number 90.
If you can't find the value for I please use the number (150).

	2011	**2010**	**2009**
Assets			
Cash	160	110	**(a)**
Accounts Receivable	100	60	70
Inventory	150	**(d)**	80
Land	40	40	40
Property, plant, and equipment	160	140	**(b)**
Liabilities and Stockholder's Equity			
Accounts Payable	50	110	175
Loan	150	200	200
Contributed Capital	310	310	310
Retained Earnings	**(g)**	**(e)**	(300)
P&L			
Income	1500	1300	900
Expenses	**(h)**	(1100)	(1200)
Net Income	300	**(f)**	(300)
Dividends	100	0	**(c)**
Cash Flow			
Net cash increase (decrease) from operating activities	220	55	(275)
Net cash increase (decrease) from Investing activities	(20)	(35)	(145)
Net cash increase (decrease) from Financing activities	**(i)**	0	510

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

Question 2: Recording Transactions (40 points)

Test Corp. ("the Company") made the following transactions during 2010 fiscal years (assume that they are listed in chronological order):

1. The business was started on January 1st by the owner when she contributed $10,000 in cash.
2. On January 1st the Company paid rent for two years in the total amount of $2,400.
3. On January 1st the Company purchased computers in the amount of $900. The computers have a useful life of 3 years and a salvage value of 0.
4. The Company provided service to customers and recognized $3,000 revenue on account (did not receive cash).
5. The Company Collected $1,500 cash from customers.
6. On July 1 the company borrowed $2,000 from M-E Bank at an interest rate of 10% for 12 months. The interest is payable on June 30, 2011.
7. On December 31 the Company distributed dividends in the amount of $600 to the owners

(a) Record ALL the effects of each of the events above on the table provided below. Mark an increase with a + and a decrease with ( ).

(b) Evaluate the effect of each transaction on the Leverage ratio (circle whether the ratio will increase/not change/decrease).

	ASSETS			LIABILITIES		EQUITY	Mark the effect on Leverage Ratio
Transaction	**Cash**	**Accounts Receivable (including other)**	**Equipment**	**Interest Payable**	**Loan**	**Shareholders Equity**	
							Increase **<u>No.change</u>** decrease
							Increase **<u>No.change</u>** decrease
							Increase **<u>No.change</u>** decrease
							Increase No.change decrease
							Increase No.change

	ASSETS			LIABILITIES		EQUITY	Mark the effect on Leverage Ratio
Transaction	Cash	Accounts Receivable (including other)	Equipment	Interest Payable	Loan	Shareholders Equity	
							decrease
							Increase No.change decrease
							Increase No.change decrease
							Increase No.change decrease
							Increase No.change decrease
							Increase No.change decrease

Question 3: Cash Flow Statement (25 points)

Use the balance sheet and income statement on the **FOLLOWING PAGES (PAGE 8-9)** to generate a cash flow statement for 2011 in the space below.

CASH FLOW STATEMENT (2011)	
Cash Flow from Operating Activities:	
Cash Flow from Investing Activities:	
Cash Flow from Financing Activities:	

CONSOLIDATED BALANCE SHEETS FOR TEST CORPORATION

	Oct 31, 2011	Oct 31, 2010
ASSETS		
Current Assets		
Cash and Cash Equivalents	420	150
Accounts Receivables	90	40
Inventory	300	680
Total Current Assets	810	870
Property, Plant, and Equipment		
Property, Plant and Equipment***	470	470
Less Cumulative Depreciation	(210)	(180)
Total Property, Plant, and Equipment	260	290
Total Assets	**1,070**	**1,160**
LIABILITIES		
Current Liabilities		
Accounts Payable	310	150
Other Current Liabilities	200	300
Total Current Liabilities	510	450
Long-term Liabilities		
Loan	0	400
Total Long-term Liabilities	0	400
Total Liabilities	510	850
SHAREHOLDER'S EQUITY		
Paid-in Capital	230	80
Retained Earnings	330	230
Total Stockholder Equity	560	310
Total Liabilities & Stockholders' Equity	**1,070**	**1,160**

*****On the first day of the period (Nov 1 2010) a property with a book value of 100 and a cumulative depreciation of 0 (zero) as of Oct 31 2010 was stolen and the company recognized its value as a loss in the P&L.**

CONSOLIDATED INCOME STATEMENT FOR TEST CORPORATION

Period Ending	**Oct 31, 2011**
Total Revenue	**2,000**
Cost of Goods Sold	1,225
Gross Profit	**775**
Operating Expenses	
Research Development	250
Selling General and Administrative	170
Depreciation and amortization	30
Total Operating Expenses	450
Operating Income or Loss	**425**
Finance Expenses	25
Income Before Tax	**400**
Non-recurring Events	
Income Tax Expense	100
Net Income From Continuing Ops	**200**
Non-recurring Events	
Loss from stolen property***	100
Net Income	**100**

*****On the first day of the period (Nov 1 2010) a property with a book value of 100 and a cumulative depreciation of 0 (zero) as of Oct 31 2010 was stolen and the company recognized its value as a loss in the P&L.**

Question 4: Ratios (15 points)

Company "WinBig"is interested in raising funding for a new activity. Here is the company's Balance sheet for January 1st, 2011 (the day in which the company is trying to raise the money):

Cash	150,000	Accounts Payable	160,000
Accounts Receivable	130,000	Accrued Expenses	40,000
Land	300,000	Long Term Loan	100,000
		Shareholder's Equity	80,000
		Paid in Capital	110,000
		Retained Earnings	90,000

The company received two funding alternatives:

1. A loan in a sum of $100,000 fully due at the end of the year, carrying a 5% interest payable at the end of the year. In addition, the company must maintain a **debt to equity ratio** equal or lower than 1.25.
2. A loan in a sum of $100,000 fully due at the end of the year, carrying a 6% interest payable at the end of the year. In addition, the company must maintain a **debt to assets ratio** equal or lower than 0.75.

***** The loan in the company's balance sheet above is a previous loan (not one of these alternatives).**

(a) Which of these alternatives WinBig should choose in order to maintain the requirements detailed above? Explain your answer and show your calculations.

Bonus Question:

5. Which of the following **could** cause an increase in the **Current Ratio**? **(5 points)**

a. Purchasing inventory with cash.
b. Purchasing inventory on credit (Accounts Payable).
c. Purchasing fixed assets with cash.
d. None of the above.