2.96/2.961 Midterm Exam Answer Key

Question 1

There are generally multiple valid equations to get to the correct answers. These are just examples. Also, note the order of performing these calculations is not simply a→i. Up to -2 marks per error.

a) Assets = Liabilities + Shareholder Equity
a+70+80+40+b=175+200+310+(300)
a = 90

b) Net Cash from Investing = (Incr in Land) + (Incr in PPE)
(145) = (40) -b
b = 105

c) $RE_{end} = RE_{begin}$ + NI - Dividends
(300) = 0 + (300) – c
c = 0

d) Assets = Liabilities + Shareholder Equity
110+60+d+40+140=110+200+310+e
d=170

e) $RE_{end} = RE_{begn}$ + NI – Dividends
e = (300)+f-0
e=(100)

f) NI = Income + Expenses
f = 1300 + (1100)
f = 200

g) $RE_{end} = RE_{begin}$+NI-Dividends
g = e + 300-100
g = 100

h) NI = Income + Expenses
300=1500+h
h=(1200)

i) Net Cash from Financing = Incr in Cash – Net Cash from Operating – Net Cash from Investing
i = 50-220-(20)
i = (150)

Question 2: Recording Transactions (40 points)

We accepted two alternative calculations for the Leverage Ratio (Debt to Equity Ratio or The Current Ratio). Accordingly, there were multiple right answers to some of the sections (for the effect on the Leverage Ratio part). The correct answers are marked in Bold and Underlined.

Each Transaction was worth 4 points (including 1 point for the effect on the ratio).

You were required to record ALL the effects of each of the transactions. Recording the ones listed below provides a complete answer. Here are some comments about reoccurring mistakes:

1. Transaction 2B is the end of year adjustment for the prepaid rent expenses.
2. Transaction 3B is depreciation (End of year).
3. Transaction 6B is required to record interest expenses for the period from July 1st to December 31 of 2010.

	ASSETS			LIABILITIES		EQUITY	Mark the effect on Leverage Ratio
Transaction	**Cash**	**Accounts Receivable (including other)**	**Equipment**	**Interest Payable**	**Loan**	**Shareholder's Equity**	
1	+10,000					+10,000	**Increase** **No.change** **decrease**
2A - on 1/1/10	(2,400)	+2,400					Increase **No.change** decrease
2B - on 12/31/10		(1,200)				(1,200)	**Increase** **No.change** **decrease**
3A -on 1/1/10	(900)		+900				Increase **No.change** **decrease**
3B -on 12/31/10			(300)			(300)	**Increase** **No.change** decrease
4		+3,000				+3,000	**Increase** **No.change** **decrease**
5	+1,500	(1,500)					Increase **No.change** decrease

Transaction	ASSETS Cash	 Accounts Receivable (including other)	 Equipment	LIABILITIES Interest Payable	 Loan	EQUITY Shareholder's Equity	Mark the effect on Leverage Ratio
6A -on 7/1/10	+2,000				+2,000		<u>**Increase**</u> <u>**No.change**</u> decrease
6B -on 12/31/10				+100		(100)	<u>**Increase**</u> No.change <u>**decrease**</u>
7	(600)					(600)	<u>**Increase**</u> No.change <u>**decrease**</u>
Total	**9,600**	**2,700**	**600**	**100**	**2,000**	**10,800**	Not required

Question 3: Cash Flow Statement

In the next page you can find the complete answer for this question. The maximum score for a complete answer for each line is described on the right column. In addition, for every additional entry (something that should not appear in this report but you added it anyway) we reduced 1 point.

Here are some comments about reoccurring mistakes:

1. Since the Income statement includes a loss of 100$ (due to the stolen property) which did not have an effect on cash – you were required to add an adjustment in the Non Cash adjustments part.
2. Although it seems the PP&E did not change during the year (Beginning Balance and Ending Balance are the same), since we know property in a value of 100$ was stolen (reduced the PP&E by a 100$) than we must assume the company purchased additional PP&E in the same amount.

Period Ending	31-Oct-11	Max score:
Net Income	**100**	0.5
Non Cash Adjustments		
Increase in Cumulative Depreciation	30	3
Increase in Accounts Receivable	-50	3
Decrease in Inventory	380	3
Increase in Accounts Payable	160	3
Decrease in Other Current Liabilities	-100	3
Loss from stolen property	100	1
Net Cash Increase from Operating Activities	620	
Cash Flow from Investing Activities		
Purchase of Property, Plant, and Equipment	-100	2
Net Cash Decrease from Investing Activities	-100	
Cash Flow From Financing Activities		
Payment of Long Term Loan	-400	3
Issuance of Stocks (Paid in Capital)	150	3
Net Cash Decrease from Financing Activities	-250	
Total Increase in Cash during the year 2011	270	
Beginning Cash Balance	150	0.5
Ending Cash Balance	420	
		25 Total

Question 4

"Shareholder's Equity" was meant to read "Share Capital", such that you were supposed to add all three lines to get $280,000 in Shareholder Equity. However, if you directly used Shareholder Equity of $80,000 and made the correct conclusion given that choice, you were not penalized. Also, if you elected to use long-term debt in these ratios instead of the more common total liabilities, you should have realized that a one-year loan is not long-term debt. In real life, you would clarify these conditions with your debtors. Also, note that taking a loan provides cash assets in addition to showing up as a liability with interest. Up to 5 marks per calculation, 5 marks for conclusion. There were 4 possible correct solutions:

If equity is $80,000 and debt is considered to be total liabilities, WinBig should choose alternative 2 since it is the only possibility:

1. D/E = $\frac{Total\ Liabilities}{Shareholder\ Equity} = \frac{160000+40000+100000+100000*1.05}{80000} = \frac{405000}{80000} = 5.06 > 1.25$ = FAIL

2. D/A = $\frac{Total\ Liabilities}{Total\ Assets} = \frac{160000+40000+100000+100000*1.06}{150000+130000+300000+100000} = \frac{406000}{680000} = 0.60 < 0.75$ = OK

If equity is $80,000 and debt is considered to be long-term debt, WinBig should choose alternative 2 since it is the only possibility:

1. D/E = $\frac{Long-term\ Debt}{Shareholder\ Equity} = \frac{100000}{80000} = 1.25 = 1.25$ = FAIL

2. D/A = $\frac{Long-term\ Debt}{Total\ Assets} = \frac{100000}{150000+130000+300000+100000} = \frac{100000}{680000} = 0.15 < 0.75$ = OK

If equity is $280,000 and debt is considered to be total liabilities, WinBig should choose alternative 2 since it is the only possibility:

1. D/E = $\frac{Total\ Liabilities}{Shareholder\ Equity} = \frac{160000+40000+100000+100000*1.05}{280000} = \frac{405000}{280000} = 1.45 > 1.25$ = FAIL

2. D/A = $\frac{Total\ Liabilities}{Total\ Assets} = \frac{160000+40000+100000+100000*1.06}{150000+130000+300000+100000} = \frac{406000}{680000} = 0.60 < 0.75$ = OK

If equity is $280,000 and debt is considered to be long-term debt, WinBig should choose alternative 1 since both are possible, but alternative 1 has a lower interest rate:

1. D/E = $\frac{Long-term\ Debt}{Shareholder\ Equity} = \frac{100000}{280000} = 0.36 < 1.25$ = OK

2. D/A = $\frac{Long-term\ Debt}{Total\ Assets} = \frac{100000}{150000+130000+300000+100000} = \frac{100000}{680000} = 0.15 < 0.75$ = OK

Question 5 (Bonus)

Current Ratio = $\frac{Current\ Assets}{Current\ Liabilities} = \frac{A}{B}$

a) (A+X-X)/B = A/B
b) (A+X)/(B+X) > A/B if A/B <1
c) (A-X)/B < A/B

The answer is b could increase current ratio if the ratio is currently less than unity. 5 marks with good explanation, 2 marks for what could have been a lucky guess with a missing/incorrect/incomplete or otherwise unsatisfactory explanation.

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