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UCLA ENG 111 FIRST MIDTERM MELIHA BULU TACIROGLU

Student Name: ______ Student ID: ______

Multiple Choice Questions (5 points each) +25

1. If a firm has $100 in inventories, a current ratio equal to 1.2, and a quick ratio equal to 1.1, what is the firm's Net Working Capital?

A. $0
B. $100
(C.) $200
D. $1,000
E. $1,200

$\frac{CA}{CL} = 1.2$ $\frac{CA - 100}{CL} = 1.1$ CA = 1200 CL = 1000
CA = 1.2CL CA = 1.1CL + 100
1.2CL = 1.1CL + 100
0.1CL = 100 CL = 1000
NWC = CA − CL
NWC = 200

2. As seen on an income statement:

~~A.~~ interest is deducted from income and increases the total taxes incurred.
~~B.~~ the tax rate is applied to the earnings before interest and taxes when the firm has both depreciation and interest expenses.
~~C.~~ depreciation is shown as an expense but does not affect the taxes payable.
(D.) depreciation reduces both the pretax income and the net income.
E. interest expense is added to earnings before interest and taxes to get pretax income.

3. Which two of the following are most apt to cause a firm to have a higher price-earnings ratio?

I. slow industry outlook
(II.) high prospect of firm growth
(III.) very low current earnings
IV. investors with a low opinion of the firm

A. I and II only
(B.) II and III only
C. II and IV only
D. I and III only
E. III and IV only

4. A firm has debt to equity ratio of 1.7, total asset turnover of 0.2, profit margin of 18%. If debt is 200K, what is Net Income?

(A.) $11.44K
~~B.~~ $18.12K
C. $24K
D. $12.12K
E. None of the above.

$\frac{D}{E} = 1.7$ $\frac{Sales}{Total\ Asset} = 0.2$ $\frac{NI}{Sales} = 0.18$ Sales = 63,529
So NI = 0.18(63,529) = 11,435
$\frac{200k}{E} = 1.7$ E = 117,647 Total Assets = 200k + 117,647 = 317,647

5. A firm has a financial objective of keeping its debt to equity ratio constant. Which of the following is most likely to happen if the firm makes a loss and does not sell any stocks or any of its fixed assets?

A. short term debt will rise
B. long term debt will rise
C. either short or long term debt or both will rise
(D.) net working capital will fall
E. equity will rise

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Numerical Questions: 1. (27 points) Annual Balance Sheet and Income Statement of Dalyan Inc. are provided below (as of Dec 31st 2015). Company would like to grow its sales by 25% from 2015 to 2016. Given the following conditions, produce Dalyan's proforma statements for 2016:

1. Sales and Costs grow at 25%.
2. Interest for 2016 is 10% of 2016 Long Term Debt. (You can check to see that Interest was 10% of Long Term Debt for 2015 as well.)
3. Tax rate is 20%. ~~No dividends are~~ distributed.
4. All accounts on the Assets side grow at the same rate as sales.
5. Accounts Payable grows at the same rate as sales.
6. Company does not issue any new stock in 2016.
7. Company wants to have a debt to equity ratio of 2.

$\frac{D}{E} = 2$

We know EBIT = 375
Interest = 0.1LTD
Taxes = (375 − 0.1LTD) 0.2
Net Income = 0.8(375 − 0.1LTD)
= Additions to RE since div = 0

$\frac{375 + NP + LTD}{888 + RE} = 2$

$\frac{375 + NP + LTD}{888 + 112 + 0.8(375 - 0.1LTD)} = 2$

Company Y, Pro Forma Income Statement

	2015	2016 (Projected)
Sales	$1,000	1250
Costs (COGS&Adm&Dep)	700	875
Interest	160	62.50
Taxable Income	140	312.50
Taxes	28	62.50
Net Income	112	250
Dividends	0	0
Additions to Retained Earnings	112	250

Company Y, Pro Forma Balance Sheet

	2015	% of Sales	2016 (Projected)		2015	% of Sales	2016 (Projected)
Current Assets				*Current Liabilities*			
Cash	160	16	200	Accounts Payable	300	30	375
Accounts Receivable	440	44	550	Notes Payable	100	10	1500
Inventory	600	60	750	*Total Current Liabilities*	400	40	
Total Current Assets	1,200	120	1500	***Long-Term Debt***	1,600	160	625
Net Fixed Assets	1,800	180	2250	***Owners' Equity***			
				Stock	888	88.8	888
				Retained Earnings	112	11.2	362
Total Assets	3,000	300	3,750	***Total Liabilities and Owners' Equity***	3,000	300	3,750

$\frac{375 + NP + LTD}{1300 - 0.08LTD} = 2$

$375 + NP + LTD = 2600 - 0.16LTD$

$NP + 1.16LTD = 2225$

Use substitution

We know Total Assets = Total Liabilities + Total Equity so

$3750 = 375 + NP + LTD + 1300 - 0.08LTD$

$3750 = 375 + NP + 0.92LTD + 1300$

$2075 = NP + 0.92LTD$

$2075 = 2225 - 1.16LTD + 0.92LTD$

$0.24LTD = 150$

$LTD = 625$

$NP = 1500$

+20

$\frac{Assets}{Assets-6} = \frac{5}{3}$ Assets = $\frac{5}{3}$ Assets − $\frac{5 \cdot 6}{3}$ = $\frac{2}{3}$

Assets = $\frac{5}{3}$ Assets − 10 10 = $\frac{2}{3}$ Assets

2. (20 points) Colpan Inc. has $6 million Debt. You pulled the following information from Colpan's financial statements:

Total Liabilities = 6 million

Equity Multiplier: 5/3 $\frac{Total\ Assets}{Total\ Equity}$ $\frac{5}{3}$ A = E + 6

Return on Equity(ROE): 17% $\frac{NI}{Total\ Equity} = 0.17$ Assets = 15 Equity = 9 $\frac{NI}{9} = 0.17$ NI = 1.53M

Profit Margin: 20% $\frac{NI}{Sales} = 0.20$

If 30% Colpan's sales are made on credit and on average (at any given day) its accounts receivables account is $500K, how many days does it take for Colpan to collect the credit it provides for selling its goods/services?

Accounts Receivables: 500k

So Assets = 15
Equity = 9
Liabilities = 6

$\frac{NI}{E} = 0.17$ so NI = 1.53M

$PM = \frac{NI}{Sales} = 0.20$

0.20 Sales = 1.53

Sales = 7.65M

Receivables Turnover = $\frac{Sales}{Accts\ Receivables} = \frac{(7.65M)0.3}{500{,}000} = 4.59$

Day Sales in Receivables = $\frac{365}{4.59}$ = **79.5 days** ✓

3. (8 points) Using market capitalization in valuing a company may be misleading. Why?

+8 Market Capitalization refers to Price per Share * Shares Outstanding, or in words, the total value of all stocks of a company at that time in the stock market.

This can be misleading as news and market trends can have an impact on this value. Day to day, market capitalization changes, and thus since external factors can play a role in the valuation, it can certainly be misleading

For each of the following statements, circle TRUE or FALSE.

Explain "Why?" with one or two sentences (5 points each)

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TRUE / (FALSE): In order to keep the Balance Sheet balanced, an increase in the total fixed assets must be offset by an equal increase in total liabilities and/or stockholders' equity.

You can use cash, a current asset to buy fixed assets, thus the overall change to assets is 0 and : Liabilities + Equity remain constant.

TRUE / (FALSE): A firm starts its year with a positive net working capital. During the year, the firm acquires more short-term debt than it does short-term assets. This means that: the ending net working capital must be negative.

Since NWC = Current Assets - Current Liabilities, a year with short term debt > short-term assets does not require NWC to be negative. For example, if a company has a large reservoir of cash, then NWC will likely remain positive even if short-term debt acquired was greater than short term assets for that year.

(TRUE) / FALSE : If a firm produces a 10% return on assets and also a 10% return on equity, then the firm has no debt of any kind.

Since Return on assets = $\frac{\text{Net Income}}{\text{Total Assets}}$ and ROE = $\frac{\text{NI}}{\text{Total Equity}}$

then Total Assets = Total Equity, but since Total Assets = Total Liabilities + Total Equity then Total Liabilities must be 0

(TRUE) / FALSE : The only difference between Joe's and Moe's is that Joe's has old, fully depreciated equipment. Moe's just purchased all new equipment which will be depreciated over eight years. Assuming all else equal: Moe's will have a lower profit margin.

Profit Margin = $\frac{\text{NI}}{\text{Sales}}$: Since Sales is assumed to be equal NI must change for there to be a difference. However, since NI is decreased by depreciation (on the income statement), Moe will have a lower profit margin.

Joe's NI > Moe's NI

Market Value Measures	Market Capitalization = Price per share * # Shares Outstanding P/E Ratio = Price Per Share / Earnings Per Share
Financial Ratios	Current Ratio = Current Assets/ Current Liabilities Quick Ratio = (Current Assets – Inventory) / Current Liabilities Cash Ratio = Cash / Current Liabilities Total Debt Ratio = (Total Assets – Total Equity) / Total Assets Debt/Equity = Total Debt / Total Equities Equity Multiplier = Total Assets / Total Equity Times Interest Earned = (Earnings Before Interest And Taxes) / Interest Cash Coverage = (EBIT + Depreciation + Amortization) / Interest Inventory Turnover = Cost of Goods Sold / Inventory Days' Sales in Inventory = 365 / (Inventory Turnover) Receivables Turnover = Sales / Accounts Receivable Days' Sales in Receivables = 365 / Receivables Turnover Total Asset Turnover = Sales /Total Assets Profit Margin = Net Income / Sales Return on Assets = Net Income / Total Assets Return on Equity = Net Income / Total Equity
Financial Cash Flow	C(A)=C(B)+C(S) C(A) =OCF- Change in NWC – Cash Flow to Fixed Assets OCF=EBIT+Depreciation-Tax Change in NWC = Ending NWC – Beginning NWC Cash Flow to Fixed Assets = Ending NFA-Beginning NFA+Depreciation (if we use the gross fixed assets, then = Ending Gross Fixed Assets – Beginning Gross Fixed Assets) C(B) = Interest-(Ending Long Term Debt – Beginning Long Term Debt) C(S) = Dividends – (Stocks sold- Stocks purchased)