UCLA Spring 2019
ENG 111 Midterm Exam
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Name:________________ ID:________________

80/100

1. (10 points) Rowan just prepared its end-of-year Balance Sheet today (given below). Its tax rate is 34% and it is using a straight-line depreciation method. It does not distribute any dividends. Its competitor has exactly the same financials (same numbers for all revenue, cost, asset, liability accounts) as of today, except, it does not have any depreciation.

What is the difference between the accumulated retained earnings of Rowan and its competitor a year from today if neither company purchases or sells any fixed assets throughout the year and they grow at 0%?

Rowan Company
Comparative Balance Sheet
(dollars in millions)

	Ending Balance	Beginning Balance
Assets		
Current assets:		
Cash and cash equivalents	$ 70	$ 91
Accounts receivable	536	572
Inventory	620	580
Total current assets	1,226	1,243
Property, plant, and equipment	1,719	1,656
Less accumulated depreciation	640	480
Net property, plant, and equipm	1,079	1,176
Total assets	$2,305	$2,419
Liabilities and Stockholders' E		
Current liabilities:		
Accounts payable	$ 205	$ 180
Accrued liabilities	94	105
Income taxes payable	72	88
Total current liabilities	371	373
Bonds payable	180	310
Total liabilities	551	683
Stockholders' equity:		
Common stock	800	800
Retained earnings	954	936
Total stockholders' equity	1,754	1,736
Total liabilities and stockholders' equity	$2,305	$2,419

C(A) = 2419 − 15 −

× (−10)

2. (5 points) When company A acquires (purchases) company B at a higher price than the acquired company's total assets, company A's Goodwill Account as well as its Equity will go up.

Do you agree? Explain with one sentence.

Company A's equity does not have to go up since A could have purchased B entirely using A's cash account in which case cash would go down while goodwill and assets would increase to balance the change.

✓ (−10)

3. (5 points) Takeover threat cannot be considered as a mitigating factor agency problem.

Do you agree? Explain with one sentence.

Since the agency problem highlights a discrepancy between management and stockholders, takeover threat could be a mitigating factor since if an outside source feels a company could be managed better, they can stage a takeover, fire management and improve the company and therefore management and shareholders have aligned interest.

4. (5 points) Which of the following events would not change the Total Equity of a company in the short run:

a) purchasing company's own stock × less
b) selling new stock, × more money through common stock
c) an economy-wide slowdown
d) increasing dividend payout ratio × less retained earnings
e) none of the above

5. (5 points) A company that has consistently high EBIT but low NI cannot be a good candidate for takeover.

Do you agree? Explain with one sentence.

It would be a good candidate for a takeover since even though the firm has high earning after operational costs, a lot of it is lost to interest and taxes which highlights a problem with management not properly taking advantage of interest/tax reduction opportunities.

6. (5 points) A company purchases a fixed asset using funds obtained from investors. Then, we know that *fixed assets* will go up and *equity* will go down among other changes on the Balance Sheet.

Do you agree? Explain with one sentence.

Equity does not have to go down since it is a shadow account; even if money originally came from investors, it immediately went to cash accounts so it is possible only the asset side of the balance sheet changes with no change in equity

7. (5 points) The Stockholders Equity of a company is given below. How much did this company collect from the markets by selling stock at the time of the sale if the company did not issue new stock after its IPO?

Stockholders' Equity	
Common Stock	26,000
Capital Surplus	196,000
Treasury Stock	-4,500
Accumulated Retained Earnings	73,500
Total Stockholder Equity	291,000

Common Stock → par value of stock × # of stocks

Capital Surplus → extra money collected per stock

total collected = 26,000 + 196,000 = $222000

8. (5 points) 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

9. (5 points) A company purchases an equipment to be used for 4 years in 2014 for $20,000. If the company is using straight line depreciation method and if the tax rate is 34%,

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.

10. (5 points) Which one of the following is a capital budgeting decision?

A. determining how much debt should be borrowed from a particular lender
B. deciding whether or not to open a new store
C. deciding when to repay a long-term debt
D. determining how much inventory to keep on hand
E. determining how much money should be kept in the checking account

11. (5 points) Which one of the following statements concerning a sole proprietorship is correct?

A. A sole proprietorship is the least common form of business ownership.
B. The profits of a sole proprietorship are taxed twice.
C. The owners of a sole proprietorship share profits as established by the partnership agreement.
D. The owner of a sole proprietorship may be forced to sell his/her personal assets to pay company debts.
E. A sole proprietorship is often structured as a limited liability company.

12. (10 points) For the first time, UBER will make its financial statements available to the public when they IPO. As we talked in class, some information can be inferred from these statements and some cannot. Here is a list of things that you would like to know about the company. Circle the ones that CAN BE inferred directly from the Financial Statements:

Debt/Equity Ratio
UBER's Market Share
Future Growth Opportunities
Patents that UBER holds
Price that is paid to image and future potential for the companies UBER acquired to date.
Human Capital used by UBER

13. (5 points) Draft a common-size income statement for a hypothetical firm using the following information: The tax rate is 50% . Net income, Depreciation, and Interest Expense are each 10% of Sales. Cost of Goods Sold is six times as big as Depreciation.

Income Statement

Sales	$1000
COGS	$ 600
Depreciation	$ 100
EBIT	$ 300
Interest	$ 100
Pre tax Income	$200
Tax (50%)	$100
Net Income	$100

14. Valyrian Inc.'s Balance Sheet and Income Statement as of Dec 31st 2018 are given below. Company has a dividend payout ratio of 0.5 and has no plans of issuing new stock or repurchasing its existing stock in the near future.

Please choose one of the scenarios below to produce the pro-forma statements of Valyrian for 2019. Scenario A is easier. Scenario B has bonus points. Please do not answer both questions. If you answer both, we will grade only scenario B.

Scenario A (25 points) Sales grow at 20%. Assets, accounts payable, NWC, COGS, SG&A costs grow at the same rate as sales. Annual depreciation cost stays the same. The conditions in the capital markets are such that short term borrowing is possible for any company but long term borrowing is available at a cost of 5% per year for those companies with a D/E less than 2 and at a cost of 10% for those with a D/E greater than 2. Produce the pro-forma income statement and balance sheet of Valyrian for Dec 31, 2019.

Scenario B (25 points plus 6 bonus points) Company uses only its internal funds to grow, no new long term debt will be obtained. That is, long term debt will stay the same. Assets, accounts payable, NWC, COGS, SG&A costs grow at the same rate as sales. Annual depreciation cost stays the same. The conditions in the capital markets are such that short term borrowing is possible for any company. Any existing long term debt has a cost of 5% interest per year for those companies with a D/E less than 2 and a cost of 10% interest for those with a D/E greater than 2. Produce the pro-forma income statement and balance sheet of Valyrian for Dec 31, 2019. What is the maximum rate Valyrian can grow at using only its internal sources?

Balance Sheet			
All numbers in thousands			
Period Ending	**12/31/18**	**Scenario A**	**Scenario B**
Current Assets			
Cash And Cash Equivalents	12,000		12,000(1+x)
Account Receivables	1,400		1400(1+x)
Inventory	3,600		3600(1+x)
Total Current Assets	**17,000**		17000(1+x)
Long Term Investments	326,000		362,000(1+x)
Net Property Plant and Equipment	278,000		278 000(1+x)
Net Goodwill	151,000		151 000(1+x)
Net Intangible Assets	57,000		57 000(1+x)
Total Fixed Assets	**812,000**		812000(1+x)
Total Assets	**829,000**		829000(1+x)
Current Liabilities			
Accounts Payable	10,000		10000(1+x)
Notes Payable	2,000		2000(1+x)
Total Current Liabilities	**12,000**		12000(1+x)
Long Term Debt	526,000		526000
Total Liabilities	**538,000**		526000+12000(1+x)
Stockholders' Equity			
Common Stock	26,000		26 000
Capital Surplus	196,000		196 000
Treasury Stock	-4,500		−4500
Accumulated Retained Earnings	73,500		.5 (Net Income) + RE2018
Total Stockholder Equity	291,000		217500 + .5 (Net Income)
Total Liabilites and Stockholders Equity	829,000		743500 + 12000(1+x) + .5(Net Income)

all assets go up @ same rate as sales, so at (1+x)

NWC = 5000 (2018)

5000(1+x)

−2

$$\frac{\text{total debt}}{\text{total equity}} = \frac{526000 + 12000(1+x)}{217500 + .5(\text{Net Income})} \Rightarrow 2$$

for 2019

−3

−5

Income Statement All numbers in thousands			
Revenue	**12/31/18**	**Scenario A**	**Scenario B**
Total Revenue	200,000		200,000(1+x)
COGS	80,000		80,000(1+x)
Selling,Gen&Adm Costs	34,000		34,000(1+x)
Depreciation	20,000		20,000
Earnings Before Interest and Taxes	66,000		86000(1+x)- 20000
Interest Expense	26,300		Y 26,300
Income Before Tax	39,700		[86000(1+x)- 20000]-Y
Tax Expense(20%)	7,940		.2([86000(1+x)- 20000]-Y)
Net Income	31,760		.8([86000(1+x)- 20000]-Y)

x = growth rate

200000(1+x) - ... (x

= 10% x LTD

-2

Total Assets   Total Liabilities/Equity

① $829000(1+x) = 743500 + 12000(1+x) + .5(.8([86000(1+x) - 20000] - Y)$

②

...rket Value Measures	Market Capitalization = Price per share * # Shares Outstanding P/E Ratio = Price Per Share / Earnings Per Share Market to Book Ratio = Market Value per Share / Book Value per Share
External Financing Formulas	$EFN = \left(\frac{\text{Assets}}{\text{Sales}}\right) \times \Delta\text{Sales} - \frac{\text{Spon Liab}}{\text{Sales}} \times \Delta\text{Sales} - (PM \times \text{Projected Sales}) \times (1-d)$
Accounting 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)