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*UCLA - ENG 111, Summer 2017* *Midterm* *Mel Bulu Taciroglu*

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**Multiple Choice Questions (3 points each)**

**1.** If a firm has $400 Net Working Capital, $200 in inventories, a current ratio equal to 1.2, $400 in Accounts Receivable. What is the Cash Ratio?

A. 0.9
B. 0.99
C 1.1
D. None of the above
E. Cannot be calculated with given info

$$\frac{CA}{CL} = 1.2 = \frac{CA}{CA-400} \Rightarrow 1.2CA - 480 = CA$$
$$0.2CA = 480.$$
$$CA = 2400.$$
$$CL = 2000.$$
$$\frac{2400-200-400}{2000} = \frac{18}{20}.$$

**2.** A financial analyst observes that a young company, Company Z, has a low debt to equity ratio. She concludes that this may be a good or a bad sign in terms of financial health of the company. Which of the following is likely to be a part of her evaluation of Company Z?

D/E low.
EM ↓.

A. Company Z is not likely to suffer from long term solvency problems. ✓
B. Company Z does not have to allocate most of its resources for cost of borrowing. ✓
C. Company Z may be missing out on a potential to grow at a higher rate. ✓
D. Only B and C
E. A, B, and C

**3.** Days' Sales in Inventory of Company X has been going up compared to its historic average. What may be a cause of this?

$$\frac{365}{I.T} = \frac{365 \times \text{Inventory}}{COGS} \uparrow$$

A. The demand for Company X's product is going down
B. The industry in which X operates is going through a structural change
C. Economy is slowing down and possibly going towards a recession
D. All of the above
E. None of the above

**4.** A firm has debt to equity ratio of 3, Net Working Capital of $2million, Current Assets of $3 million and Long Term Debt of $8 million. How much Equity does this firm have?

A. $3 million
B. $9 million
C. $6 million
D. $1.6 million
E. None of the above.

short term = 1 million.
8 million
Total Debt 9.

**5.** SnapZap Inc. decides to buy back its own stocks because:

A. SnapZap is trying to meet its target financial ratios ✓
B. SnapZap finds the current stock price low relative to the value company offers ✓
C. SnapZap does not see a better investment opportunity in the market ✓
D. A and B
E. A, B, and C

**6.** An increase in which of the following accounts increases a firm's current ratio without affecting its cash ratio?

A. Accounts payable
B. Cash X
C. Accounts receivable
D. Notes Payable
E. None of the above

**7.** According to the Generally Accepted Accounting Principles:

a) Intangible assets cannot be recorded under balance sheet, they have to be recorded in pro-forma financial statements. X
b) Intangible assets do not depreciate. X.
c) Taxes have to be paid in the year they are due.
d) Assets are recorded according to how liquid they are with less liquid ones recorded first. X
e) Revenue coming from a one-time sale of a plant or an equipment cannot be recorded under the operating section of income statement.

**8.** As a direct effect of the increased stock price of a company:

A. Earnings would go up.
B. Equity would go up. X
C. Profit Margin would go up.
D. Market Capitalization would go up. ✓.
E. c and d

**Numerical Questions:**

**1.** (42 points) The accounts related to the Balance Sheets as well as Income Statements for Company Y are given below (as of Dec 31st 2015 and Dec 31st 2016). Company Y does not distribute any dividends and had no depreciation in 2015 and 2016.

| Accounts in $ | 2015 | 2016 |
|---|---|---|
| Sales | 1,000 | 1,250 |
| Common Stock | 888 | 888 |
| Cost of Goods Sold | 700 | 875 |
| Retained Earnings | 112 | 362 |
| Interest | 160 | 62.5 |
| Long Term Debt | 1600 | 625 |
| Taxes | 28 | 62.5 |
| Notes Payable | 100 | 1,500 |
| Net Fixed Assets | 1,800 | 2,250 |
| Accounts Payable | 300 | 375 |
| Inventory | 600 | 750 |
| Accounts Receivable | 440 | 550 |
| Cash | 160 | 200 |

a) (17 points) Produce Company Y's Income Statements and Balance Sheets for 2015 and 2016.

Income Statements:

| | 2015 | 2016 |
|---|---|---|
| Sales | 1,000 | 1,250 |
| Cost of Goods Sold | 700 | 875 |
| EBIT | 300 | 375 |
| Interest | 160 | 62.5 |
| Pre-tax Income | 140 | 312.5 |
| Taxes | 28 | 62.5 |
| Net Income | 112 | 250 |
| Addition to RE | 112 | 250 |

dividends

Balance Sheet:

| | 2015 | 2016 |
|---|---|---|
| Cash | 160 | 200 |
| Accounts Receivable | 440 | 550 |
| Inventory | 600 | 750 |
| Total Current Assets | 1200 | 1500 |
| Net Fixed Assets | 1800 | 2250 |
| Total Assets | 3000 | 3750 |

| | 2015 | 2016 |
|---|---|---|
| Accounts Payable | 300 | 375 |
| Notes Payable | 100 | 1500 |
| Total Current Liabilities | 400 | 1875 |
| Long Term Debt | 1600 | 625 |
| Common Stock | 888 | 888 |
| Retained Earnings | 112 | 362 |
| Total Liabilities & Equity | 3000 | 3750 |

b) (5 points) Calculate the Cash Flow from Assets for 2016:

Operating Cash Flow = EBIT - Tax = 375 - 62.5 = 312.5

Change in NWC = ( 1500 - 1875 ) - ( 1200 - 400 ) = -1175.

Cash Flow to Fixed Assets = END NFA - Beginning NFA = 2250 - 1800. = 450.

Cash Flow from Assets = 312.5 - (-1175) - 450 = 1037.5.

c) (5 points) Calculate the Cash to Creditors and Stock Holders for 2016:

C(B) = 62.5 - ( 625 - 1600 ) = 1037.5

C(S) = 0 - ( 888 - 888 ) = 0.

d) (5 points) Does it take more or less time for Company Y to sell its inventory in 2016 compared to 2015?

Inventory Turnover 2015 = 700/600 = $\frac{7}{6}$. Day's Sales in Inventory 2015 = $\frac{365}{\frac{7}{6}}$ = 312.9 days

Inventory Turnover 2016 = 875/750 = $\frac{7}{6}$.

⇒ For both 2016 and 2015. Company Y takes same time to sell its inventory.

e) (5 points) Did the Debt/Equity ratio go up or down from 2015 to 2016?

Debt/Equity 2015 = 2000/1000 = 2.

Debt/Equity 2016 = 2500/1250 = 2

⇒ The Debt/Equity ratio didn't change from 2015 to 2016.

f) (5 points) How did the Net Working Capital change from 2015 to 2016? Would you interpret this change as a positive or negative move with respect to the financial health of the company?

NWC 2015 = 1200 - 400 = 800.

NWC 2016 = 1500 - 1875 = -375.

⇒ The Net Working Captial went down significantly from 2015 to 2016, even became negative in 2016. The net working capital grows with the company, so it signifies the size of the company. This change is a negative move with respect to the financial health of the company because the company shrank dramatically during one year.

**2.** You are the Financial Manager of Linkedin Inc. You wish to maintain a growth rate of 12% per year and a debt-equity ratio of .30. Profit Margin is 5.9%, and the ratio of Total Assets to Sales is constant at .85. Is this growth rate possible?

$$ROE = PM \times TAT \times EM = 0.059 \times \frac{1}{0.85} \times (1+0.3) = 0.0902$$

$$\text{Sustainable growth rate} = \frac{ROE \times b}{1 - ROE \times b} = 0.12$$

$$ROE \times b = 0.12 - 0.12 \times ROE \times b$$

$$1.12\, ROE \times b = 0.12$$

$$ROE \times b = 0.1071$$

$$\Rightarrow b = 1.88$$

Since the plowback ratio is a value in a range [0, 1], this grow rate is impossible

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

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

PLEASE NOTE THAT EXPLANATION IS THE BASIS FOR ALLOCATING POINTS RATHER THAN STUDENT'S CHOICE OF TRUE OR FALSE IN EACH QUESTION!

TRUE / FALSE : If a company is not producing positive operating cash flow, it is not a good candidate for takeover.

OCF = EBIT+Depreciation−Tax. A negative OCF means the company doesn't generate profit. After paying interest, the company will experience short of money, which is not a good company for future growth. may have other valuables

+1

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

NWC = Total current assets − Total current liabilities. If the amount in change is small, compared to the NWC, the NWC will probably still be negative. Also, there are other accounts such as cash, account receivables effecting NWC.

TRUE / FALSE : The cash flow to stockholders of a young, high-growth firm is most likely to be zero.

A young, high-growth firm is likely to have its funds from debt. So it has high Debt/equity ratio, and ROE should be large with little equity. Therefore, little equity requires little dividends, and cash flow to stockholder is very small

TRUE / FALSE : A firm records a loss for 2015 in its income statement. Then, Cash Flow From Assets for 2015 must be negative.

C(A) = OCF − change in NWC − Cashflow to fixed assets

$= EBIT + \cancel{\text{depreciation}} - Tax \underbrace{- \text{End NWC} + \text{Beginning NWC}}_{①} \underbrace{- \text{END NFA} + \text{Beginning NFA}}_{②} - \cancel{\text{Depreciation}}$

A negative net income results a shrink in the assets. So term ① and ② are likely to be positive. Since EBIT − Tax may not be negative, the C(A) may be positive