Multiple Choice Questions (5 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

CA-CL=400, CA=1.2CL, CL=2000, CA=2400, Cash Ratio = (2400-200-400)/2000 =0.9

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?

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?

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.

CL=\$3M-\$2M=\$1M, Total Debt = \$1M+\$8M=\$9M, D/E=3, \$9/E=3, E=\$3M

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

Numerical Questions:

1. (55 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) (25 points) Produce Company Y's Income Statements and Balance Sheets for 2015 and 2016.

Company Y Inc., Pro Forma Income Statement		
	2015	***2016***
Sales	*$1,000*	*1,250*
Costs (COGS&Adm&Dep)	*700*	*875*
Interest	*160*	*0*
Taxable Income	*$140*	*375*
Taxes(20%)	*28*	*75*
Net Income	*$112*	*300*
Dividends	*0*	*0*
Additions to Retained Earnings	*$112*	*300*

Company Y Inc., Pro Forma Balance Sheet					
	2015	***2016***		***2015***	***2016***
Current Assets			*Current Liabilities*		
Cash	*160*	*200*	*Accounts Payable*	*300*	*375*
Accounts Receivable	*440*	*550*	*Notes Payable*	*100*	*1500*
Inventory	*600*	*750*	***Total Current Liabilities***	*400*	*1875*
Total Current Assets	*1200*	*1500*	*Long-Term Debt*	*1600*	*625*
Net Fixed Assets	*1800*	*2250*	*Owners' Equity*		
			Stock	*888*	*888*
			Retained Earnings	*112*	*362*
Total Assets	*3000*	*3750*	***Total Liabilities and O.E.***	*3000*	*3750*

b) (6 points) Calculate the Cash Flow from Assets for 2016:

Operating Cash Flow = 1250-875- 62.5 = 312.5

Cash Flow to NWC = (1500 - 1875) – (1200- 400) = -375-800 = - 1,175

Cash Flow to Fixed Assets = 2,250-1,800 = 450

Cash Flow From Assets = 312.5 – (-1,175) – 450 = 1,037.5

c) (6 points) Calculate the Cash to Creditors and Stock Holders for 2016:

Cash to Creditors = 62.5 - (625-1,600) = 1,037.5

Cash to Stock Holders = 0

d) (6 points) Does it take more or less time for Company Y to sell its inventory in 2016 compared to 2015?

Days' Sales in Inventory for 2015: 365 / (700/600) = 312.86

Days' Sales in Inventory for 2015: 365 / (875/750) = 312.86

e) (6 points) Did the Debt/Equity ratio go up or down from 2015 to 2016?

Debt / Equity for 2015 = 2,000/1,000 = 2

Debt / Equity for 2016 = (1,875+625) /(888+362) = 2 … stays the same

f) (6 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 = 1,200-800 = 400, *NWC 2016 = 1,500 – 1,875 = -375*

It looks bad since the company cannot cover its short term liabilities with its liquid assets. Also note that the Operating cash flow is not enough to cover the difference between Short Term Liabilities and Assets, which is alarming!

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.

It is possible that company has other assets that may have value. For example, customer/member base, foot traffic, image are valuable assets. (Extensively discussed in class under current events)

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.

Not necessarily. If the initial negative NWC is higher than extra accumulated short term assets, new NWC will still be negative.

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

A young, high-growth company is not expected to distribute any dividends. Stock buying and selling are rare events as well. Therefore, cash flow to stockholders will be most probably zero.

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

Not Necessarily. For example, if the firm depleted its NWC, that is Ending NWC is lower than Beginning NWC, and company did not buy any new fixed assets, then Cash Flow from Assets can still be positive.

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)
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)