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FIN 301 – Exam 1 – Practice Exam Solutions

1. E – Return on equity = 70%

$$CA + FA = CL + LTD + SE$$

$$\$500 + \$260 = \$320 + \$240 + SE$$

$$SE = \$200$$

$$CR = CA / CL$$

$$CR = \$500 / \$320$$

$$CR = 1.56$$

$$\text{Asset turnover} = \text{Sales} / \text{Total assets}$$

$$\text{Asset turnover} = \$1,060 / (\$500 + \$260)$$

$$\text{Asset turnover} = 1.39$$

$$\text{Debit to equity ratio} = LTD / \text{Equity}$$

$$\text{Debit to equity ratio} = \$240 / \$200$$

$$\text{Debit to equity ratio} = 1.20$$

$$\text{Return on equity} = \text{Net income} / \text{Shareholder's equity}$$

$$\text{Return on equity} = \$140 / \$200$$

$$\text{Return on equity} = 0.70 = 70\%$$

2. B – Negative 42%

$$\text{Growth rate (percentage)} = [(\text{New} - \text{Old}) / \text{Old}] \times 100$$

$$\text{Growth rate (percentage)} = [(\$14 - \$24) / \$24] \times 100$$

$$\text{Growth rate (percentage)} = -42\%$$

3. B – Pied Piper is the most likely to default on its debt

Current ratio = Current assets / Current liabilities – Measures a company's liquidity. As its current ratio increases, the company becomes more liquid. Dunder Mifflin is the most liquid company. Pied Piper is the least liquid company.

Inventory turnover = COGS / Inventory – Measures a company's ability to manage its inventory. As inventory turnover ratio increases, the company is more effective managing inventory. Dunder Mifflin is the most effective company for managing inventory. TGS is the least effective at managing its inventory.

Times interest earned = EBIT / Interest expense –As times interest earned increases, a company's risk of defaulting on its debt goes down. TGS is the least likely to default on debt because it has the highest times interest earned. Pied Piper is the most likely to default on debt because it has the lowest times interest earned.

4. E – Insurance
5. E – Both C and D
6. D – Dividends are a cash flow from **financing** activities

7. C – Times interest earned = 2.67x

Total asset turnover = Sales / Total assets

Total asset turnover = \$16,000 / \$15,000

Total asset turnover = 1.07

Common size interest expense = Interest expense / Net sales

Common size interest expense = \$1,500 / \$16,000

Common size interest expense = 0.094 = 9.4%

Times interest earned = EBIT / Interest expense

Times interest earned = \$4,000 / \$1,500

Times interest earned = 2.67x

Return on assets = Net income / Total assets

Return on assets = \$1,600 / \$15,000

Return on assets = 0.107 = 10.7%

Net profit margin = Net income / Sales

Net profit margin = \$1,600 / \$16,000

Net profit margin = 0.100 = 10.0%

8. A – Dunder Mifflin does the worst job generating profits from its assets

Return on assets = Net income / Total assets – Tell us how much profit is generated per dollar of total assets. As ROA increases, it means the company is doing a better job generating profit from its assets. Dunder Mifflin does the worst job generating profit from its assets. TGS does the best job generating profit from its assets.

Net profit margin = Net income / Sales – Tell us how much income we are generating per sales dollar. As net profit margin increases, it means the company is doing a better job generating profit from sales. Pied Piper is the best company at generating profits from sales. Dunder Mifflin is the worst company at generating profits from sales.

Debt to equity = Long-term debt / Equity – Tell us how much debt a company is carrying per dollar of equity. As the debt to equity ratio increases, a firm becomes more leveraged. Pied Piper is the most leveraged firm. TGS is the least leveraged firm.

9. E – Companies that generate free cash flow
10. B – They have low P/E ratios because they have low expected growth. A company's price-to-earnings (P/E) ratio calculates the market price of stock per \$1 of earnings. A high P/E ratio indicates investor confidence in a company's ability to grow and earn higher future profits. Utility companies don't usually have many growth prospects, so they tend to have low P/E ratios.
11. B – They require new investment dollars to be able to continue to operate.
12. E – Both C and D. Suppliers and bankers use liquidity ratios to determine a company's ability to pay its short-term obligations.
13. C – 15%. This is the average ROE for the S&P 500.
14. E – Both A and D. The ease of being able to get a home loan led to the excessive investment in the housing market that caused the housing market bubble.
15. A – 10K, 10Q
16. D – An increase in the U.S. inflation rate
17. B – The CFO is the head accountant of a company. This answer is an incorrect statement because the controller is the head accountant of the company. Both the controller and the treasurer report directly to the CFO.
18. C – \$500,000

$$\begin{aligned} \text{Current assets} + \text{PP\&E} + \text{Other assets} &= \text{Current liabilities} + \text{Long-term debt} + \\ &\text{Shareholders' equity} \\ \$500,000 + \$100,000 + \$200,000 &= \$100,000 + \$200,000 + \text{SE} \\ \text{SE} &= \$500,000 \end{aligned}$$

19. B – \$325,000. Net income and the sale of equipment are both sources of cash inflows. Depreciation is a noncash expense. We need to add the depreciation expense to net income because depreciation reduces net income but it does not reduce cash flows. Finally, a repurchase of common stock is a cash outflow because the company is spending cash to acquire shares of its stock on the open market.

It is important to note that this particular problem is asking for us to solve for net cash flow for the company as a whole. Make sure to pay attention to whether you are asked for just net cash flow or net cash flow for a particular section of the statement of cash flows.

$$\text{Net cash flow} = \$300,000 + \$50,000 + \$75,000 - \$100,000 = \$325,000$$

20. B – That the expenses related to the sale of goods must be matched in that period

21. A – It was originally a textile company.

22. D – Shifting current income to later periods

23. C – Maximizing spending on all projects. Make sure to note that all of the other answers are ways to increase shareholder value.

24. D – Preparing financial statements. Make sure you know which responsibilities are related to the controller and which responsibilities are related to the treasurer. The controller is the company's head accountant, and the treasurer is in charge of the finance side of the company.

25. D – They report as of a certain interval in time. This statement is false because the balance sheet is the only financial statement that reports as of a specific date and time.

26. C – Corporations have the most trouble raising capital. This statement is false because corporations are the best organizational form for raising capital.

27. B – Stockholders are the last to be compensated in the event of a bankruptcy.

28. B – Asset diversification

29. B – Ratio analysis

30. B – Riskier investments usually have lower returns. This statement is false because there is a direct trade-off between risk and return. Riskier investments will generate higher returns.
31. A – Stock prices immediately reflect new information. As soon as information is publically available, it is almost immediately reflected in a firm's stock price.
32. D – Stockholders are not protected by contracts while the other stakeholders are protected by contracts. In the event of liquidation, stakeholders are only owed the firm's residual cash flows after everyone else has been paid.
33. B – Management investing in projects that serve management more than their shareholders. This is considered to be the largest agency cost. The other main agency cost is management over spending on perks, like corporate jets.
34. B – Audited financial statements. The others are examples of external control mechanisms.
35. B – They report, over an interval of time, the net assets generated, the net assets consumed, and the net income. This is good wording to know because it is kind of a strange way to say what the income statement reports. The income statement takes all revenues minus all expenses to find net income. Net assets generated means revenues, and net assets consumed means expenses.
36. B – Gross profit = \$8,000; operating profit = \$5,800

Gross profit = Sales – Cost of goods sold

Gross profit = \$15,000 – \$7,000 = \$8,000

Operating profit (EBIT) = Gross profit – SG&A expenses – Depreciation expense – Other operating exp

Operating profit (EBIT) = \$8,000 – \$1,000 – \$1,200 = \$5,800

*Note that you did not need to use interest expense or tax expense to solve for operating profit. Refer to the packet's section on the income statement for more information on this topic.

37. D – 53%

Gross profit margin percent = Gross profit / Sales

Gross profit margin percent = $\$8,000 / \$15,000 = 0.53 = 53\%$

38. B – \$102 billion

Market cap = Current stock price x Number of shares outstanding

Market cap = $\$25.50 \times 4 \text{ billion} = \102 billion

39. D – Financial crises are the result of overinvestment in a market or specific areas of the economy.

40. D – Both A and B

41. B – Employees are corporate stakeholders. A stakeholder is any person or organization that is invested in the economic well-being of the firm.

42. A – Interest expense. Interest expense relates to what is paid to creditors for borrowing money.

43. C – Cost of goods sold. Cost of goods sold is what is paid to suppliers when a firm purchases inventory.

44. A – Operating section. Any item found on the income statement is an operating cash flow.

45. A – The effects of supply and demand

46. B – Corporate earnings

47. B – Managing a firm's short-term financial position. Make sure to associate working capital management with short-term financial management.

48. B – Cash from investing activities. Cash used to buy or sell long-term assets is always an investing activity.

49. C – A high stock price. A high stock price makes a company very expensive to take over.

50. A – CEOs and CFOs must sign off on financial statements. This makes the CEO and CFO personally liable if the company misrepresents its financial position.
51. A – Increased government intervention. The government has stepped up regulation on financial institutions.
52. D – Deciding the appropriate mix of long-term debt and equity that should be used to finance the company's operations. Capital structure decisions are long-term decisions that relate to the mix of debt and equity capital a firm uses.
53. B – Management needs to be accountable to their shareholders.
54. C – Management should have an equity stake in the company.
55. D – Inflation. Transaction costs, taxes, and inflation all hurt an investment's profits.
56. B – A dollar held currently is worth more than a dollar at some point in the future.
57. A – Treasury bills
58. E – Small-cap stocks. Small-cap stocks mean stocks of small companies.
59. C – Liquidity ratios
60. C – Current ratio. The current ratio measures a company's ability to meet short-term debt obligations.
61. B – Inventory. Inventory is considered the least liquid current asset, so it is not included in the quick ratio.
62. E – Late 2000s. This is referring to the housing market crash.
63. E – The board of directors represents the interests of the shareholders.
64. D – Proceeds from issuing equity. Financing activities relate to cash received or paid in relation to principle on loans (not interest) and cash received or paid out to owners.

65. C – A typical company has positive cash flows from investing activities. This statement is false because the net cash flow from investing activities is usually negative because companies usually buy more long-term assets than they sell.

66. B – \$8mm. This type of problem can seem confusing at first, but it is fairly easy to solve once you know the trick. It is important to note that this problem only wants to know the cash flows from operations. All cash flows on the income statement are operating cash flows. However, depreciation is a noncash expense, so you need to add the depreciation expense to net income to find the cash flows from operations.

Cash flows from operations = Net income + Depreciation

Cash flows from operations = \$3 mil + \$5 mil = \$8 mil

67. D – 7

Times interest earned = EBIT / Interest expense

Times interest earned = \$700,000 / \$100,000 = 7

68. A – CCC Bank. CCC Bank has the highest liquidity ratios and the lowest debt-to-equity ratio.

69. C – Chris's Tutoring is raising more funds through debt, so it can expect a higher upside than Josh's Online Tutoring. Since Chris's tutoring has a higher debt-to-equity ratio, it has more potential to earn high returns. However, the additional debt held by Chris's tutoring also means that Chris's tutoring has more risk and has a greater chance of bankruptcy if the company is not able to make its interest payments.

70. A – 0.2

Total asset turnover = Sales / Total assets

Total asset turnover = \$10mm / \$50mm = 0.2

71. A – PP&E / Total assets

All items on a common-size balance sheet are computed as a percent of total assets. All items on a common-size income statement are computed as a percent of net sales.

Percent of total assets = Balance sheet item / Total assets

Percent of net sales = Income statement item / Net sales

72. E – Debt/Equity = 0.9

Profit margin = Net income / Sales

Profit margin = \$80,000 / \$200,000 = 0.40 = 40%

Current ratio = Current assets / Current liabilities

Current ratio = \$100,000 / \$50,000 = 2.0

Quick ratio = (Current assets – Inventory) / Current liabilities

Quick ratio = (\$100,000 - \$20,000) / \$50,000 = 1.6

Current assets + Fixed assets = Current liabilities + Long-term debt + Shareholders' equity

\$100,000 + \$200,000 = \$50,000 + \$100,000 + Shareholders' equity

Shareholders' equity = \$150,000

*Note that you don't include the value of inventory in the equation above because inventory is part of current assets.

Debt-to-equity ratio = Long-term debt / Equity

Debt-to-equity ratio = \$100,000 / \$150,000 = 0.67

73. A – It is easiest for corporations to raise large amounts of capital.

74. C – It is common for Japanese companies in Keiretsu to have cross-holdings of common stock.

75. C – The statement of cash flows

76. D – Profitability ratios

77. B – Company X uses debt more sparingly than Y or Z.

Company X has the lowest debt-to-equity ratio.

Company X manages its inventories most efficiently because it has the highest inventory turnover ratio.

Company Z is best at generating income from its assets because it has the highest return on assets (ROA).

Company Z is the most profitable because it has the highest profit margin.

Company Y collects payments slower than X and Z because it has the highest days sales outstanding (DSO).

78. C – Company Z provides its investors with the highest return.

Company Z has the highest profit margin.

Company Z is the most leveraged because it has the highest debt-to-equity ratio.

Company Z provides investors with the highest returns because it has the highest return on equity (ROE).

Company Z has the most growth potential because it has the highest price-to-earnings (P/E) ratio.

Company X is the most liquid because it has the highest current ratio.

79. A – All stakeholders

80. B – The stockholders

81. B – CEOs. This is because it is now more common for other companies to acquire companies that are struggling. Because the CEO is the person making the call with the acquisition, he is considered the new Danny DeVito.

82. E – Both A and C. Answer A allows you to hold onto cash longer. Answer C allows to receive cash sooner.

83. B – It was repealed in the 1990s to decrease the amount of influence the government had on the financial markets.

84. A – The creation of a consumer protection agency that ensures that consumers are protected.

85. D – Compensation for Wall Street bankers is at an all-time low due to their role in the financial crisis.

86. C – 50

$$CCC = DSI - DPO + DSO = 45 - 15 + 20 = 50$$

87. C – Invest when the cost of capital is less than the return on investment.

88. C – Stocks have limited liability because the most you can lose is the amount of your initial investment.

89. E – All of the above

90. A – When the tax shield benefits equal the risk of financial distress

91. B – \$2,000

$$\text{Tax shield} = \text{Debt} * \text{interest rate} * \text{tax rate} = \$100,000 * 0.05 * 0.4 = \$2,000$$

92. D – Software designer because companies like Google have large cash deposits but do not finance with debt because they are extremely cash flow positive.

93. A – 8.84%

$$WACC = (\$1 \text{ mil} / \$5 \text{ mil})(7\%)(1 - 0.40) + (\$4 \text{ mil} / \$5 \text{ mil})(10\%) = 8.84\%$$

94. E – Both B and D

95. C – When calculating the cost of debt, a company needs to adjust for taxes, because interest payments are tax deductible. This is why we multiply by one minus the tax rate when calculating WACC.

96. E – 128 days

Inventory turnover = $\text{COGS} / \text{Avg Inventory}$

Inventory turnover = $\$800,000 / \$200,000$

Inventory turnover = 4

DSI = $365 / \text{Inventory turnover}$

DSI = $365 / 4$

DSI = 91.25

Receivables turnover = $\text{Sales} / \text{Avg account receivable}$

Receivables turnover = $\$1,600,000 / \$160,000$

Receivables turnover = 10

DSO = $365 / \text{Receivables turnover}$

DSO = $365 / 10$

DSO = 36.5

Operating cycle = $\text{DSI} + \text{DSO}$

Operating cycle = $91.25 + 36.5$

Operating cycle = 127.75

97. D – 55 days

Payables turnover = $\text{COGS} / \text{Accounts payable}$

Payables turnover = $\$800,000 / \$160,000$

Payables turnover = 5

DPO = $365 / \text{Payables turnover}$

DPO = $365 / 5$

DPO = 73

CCC = $\text{DSI} + \text{DSO} - \text{DPO}$

CCC = $91.25 + 36.5 - 73$

CCC = 54.75

98. A – Dunder Mifflin has a longer operating cycle but a shorter cash conversion cycle.

Dunder Mifflin

$$\text{DSI} = 20$$

$$\text{DSO} = 60$$

$$\text{DPO} = 70$$

$$\text{Operating cycle} = \text{Days sales in inventory (DSI)} + \text{Days sales outstanding (DSO)}$$

$$\text{Operating cycle} = 20 + 60$$

$$\text{Operating Cycle} = 80$$

$$\text{CCC} = \text{Days sales in inventory (DSI)} + \text{Days sales outstanding (DSO)} - \text{Days payables outstanding (DPO)}$$

$$\text{CCC} = 20 + 60 - 70$$

$$\text{CCC} = 10$$

Kwik-E-Mart

$$\text{DSI} = 40$$

$$\text{DSO} = 15$$

$$\text{DPO} = 30$$

$$\text{Operating cycle} = \text{Days sales in inventory (DSI)} + \text{Days sales outstanding (DSO)}$$

$$\text{Operating cycle} = 40 + 15$$

$$\text{Operating Cycle} = 55$$

$$\text{CCC} = \text{Days sales in inventory (DSI)} + \text{Days sales outstanding (DSO)} - \text{Days payables outstanding (DPO)}$$

$$\text{CCC} = 40 + 15 - 30$$

$$\text{CCC} = 25$$

99. E – All of the above

100. E – 7.9%

Total market value of debt and equity = Market value of debt + Market value of equity
Total market value of debt and equity = \$20,000

Weight of debt = Market value of debt / Total market value of debt and equity
Weight of debt = \$6,000 / \$20,000 = 0.3

Weight of equity = Market value of equity / Total market value of debt and equity
Weight of equity = \$14,000 / \$20,000 = 0.7

WACC = (Weight of debt)(Cost of debt)(1 – Tax rate) + (Weight of equity)(Cost of equity)
WACC = (0.30)(5%)(1 – 0.40) + (0.70)(10%) = 7.9%

101. B – Lowering the interest rate on debt is the same thing as decreasing the cost of debt, which will reduce the company's WACC.

102. B – Recording revenue too soon. The company should only record revenue once the services have been provided.

103. B – Capital budgeting decisions relate to investment in long-term assets. A new distribution center is an example of a long-term asset.

104. A – Capital structure decisions relate to how a company uses long-term debt and equity to finance projects. Bonds are an example of long-term debt.

105. E – When inventory increases from one period to the next, it means we purchased more inventory than we sold during the period. Therefore, an increase in inventory is a use of cash.

106. D – 67%

Growth rate = (\$5 billion – \$3 billion) / \$3 billion
Growth rate = 0.67 = 67%

107. B – 5.8

P/E ratio = Stock price / EPS
P/E ratio = \$42 / \$7.20
P/E ratio = 5.8

108. B – \$18 million. Stock splits do not impact a company's market cap. When the number of shares outstanding are increased, the stock price decreases proportionally. Before the stock split the market cap was \$18 million ($\$90 \times 200,000 \text{ shares} = \18 million). After the stock split, the company's shares outstanding increased to 600,000 ($200,000 \times 3 = 600,000$) and the stock price fell to \$30 ($\$90 / 3 = \30). So the market caps remains \$18 million ($\$30 \times 600,000 \text{ shares} = \18 million).

109. A – 5%

Dividend yield = Dividend / Stock price

Dividend yield = $\$1 / \20

Dividend yield = $0.05 = 5\%$

110. C – 50%

Dividend payout ratio = Dividend / Earnings per share

Dividend payout ratio = $\$1 / \2

Dividend payout ratio = $0.5 = 50\%$

111. D – The stock price will increase because of the positive NPV associated with investments. Firms only invest in projects that they expect will be profitable. When a firm announcements a new project or investment, it means the firm expects that it will be generating additional profit from the investment.

112. A – Boosting income with a one-time gain

113. A – Amazon pays its bills in 32 days.

Days payable outstanding tells us how long it takes a company to pay its bills on average.

Accounts payable turnover tells us how many times a company pays its bills within a year.

Total asset turnover tells us how many dollars of sales a firm generates for each dollar of assets.

Times interest earned tell us how many dollars of income are earned relative to the company's interest expense.

Debt to equity compares the amount of debt a company has relative to shareholders' equity. The company has more debt than equity when the debt to equity ratio is greater than 1.

114. True – All balance sheet accounts are divided by total assets in a common-size balance sheet.

115. False – Currency markets are the largest markets in the world.

116. False – A company's revenue for the period is found on the income statement.
117. True
118. False – The dividend yield compares the company's dividend to the company's stock price.
119. True
120. True – Grocery stores sell through their inventory more frequently than utility companies.
121. True – Increasing accounts receivable turnover from 3.0 to 5.0 means the company is collecting cash from credit sales faster, which results in an increase of cash.
122. False – The price of gold increases in times of uncertainty, particularly during financial crises.
123. False – Gross profit is the difference between revenue and cost of goods sold.
124. False – The 30-year treasury yield is not a measure of inflation.
125. False – Issuing dividends will result in a cash outflow because dividends are paid to shareholders.
126. False – Companies pay fewer dividends after a stock repurchase because they do not have to pay dividends on the repurchased shares.
127. True
128. False – The NASDAQ includes the world's best known technology and biotech firms.
129. False – Paying dividends is a cash flow from financing activities.
130. True
131. True
132. False – Working capital decisions relate to the company's current assets and liabilities.
133. True
134. True – Accounts payable turnover measures how many times a company pays its bills within a year. Increasing the accounts payable turnover from 6.0 to 8.0 means the company is paying its bills more frequently, which will cause cash to decrease.
135. True
136. False – Stock buybacks do not impact the amount a company pays in taxes.

137. False – Retained earnings is a shareholders' equity account.