

NAME \_\_\_\_\_ ID# \_\_\_\_\_

1. Identify which financial statements are appropriate to use for each event listed below.

Event 1: Can the firm meet all its short-term obligations?

Event 2: How much of the firm's earnings are put back into the company for reinvestment, and how much is paid out as dividend?

- |  |  |
|--|--|
| a. Balance Sheet, Income Statement                     | b. Balance Sheet, Statement of Cash Flow     |
| c. Balance Sheet, Statement of Stockholders' Equity    | d. Income Statement, Statement of Cash Flows |
| e. Income Statement, Statement of Stockholder's Equity |  |

Answer: c

Event 1: can be checked using B/S, Event 2: can be checked using Statement of Stockholders' Equity (or Statement of Retained Earnings)

2. If the ROAs are the same, but the ROEs are different between the two firms, what is causing this disparity?

- a. Profits   b. Revenues   c. Debt   d. Dividends   e. Taxes

Answer: c

ROE = PM \* TAT \* m = ROA \* m (m is equity multiplier; TA/TE). Equity multiplier shows leverage effect on return.

3. I checked the Microsoft stock price at 9:12am this morning. It was \$24.88. The last 12 month trailing (ttm) net earnings is \$14.58 billion with 9 billion shares. What is the 12 month trailing P/E ratio?

- a. 15.36   b. 13.31   c. 17.88   d. 12.21   e. 20.33

Answer: a

P/E = Price per share / Earnings per share = \$24.88 / (\$14.58 billion / 9 billion) = 15.36

4. Which of the following statements is CORRECT?

- Dividends paid reduce the net income that is reported on a company's income statement.
- If a company uses some of its bank deposits to buy short-term, highly liquid marketable securities, this will cause a decline in its current assets as shown on the balance sheet.
- If a company issues new long-term bonds to purchase fixed assets during the current year, this will increase both its reported current assets and current liabilities at the end of the year.
- Accounts receivable are reported as a current liability on the balance sheet.
- If a company pays more in dividends than it generates in net income, its retained earnings as reported on the balance sheet will decline from the previous year's balance.

Answer: e

a. Incorrect as net income (=net earnings) is already given when dividends are paid.

b. Incorrect as current assets have both marketable securities and bank deposits (as cash). Therefore, the total current assets would not change.

c. Long-term bonds and fixed assets are not current liabilities and current assets.

d. A/R are current asset.

5. On 12/31/08, Hite Industries reported retained earnings of \$525,000 on its balance sheet, and it reported that it had \$135,000 of net income during the year. On its previous balance sheet, at 12/31/07, the company had reported \$445,000 of retained earnings. No shares were repurchased during 2008. How much in dividends did the firm pay during 2008?

- a. \$49,638   b. \$52,250   c. \$55,000   d. \$57,750   e. \$60,638

Answer: c

12/31/08 RE	\$525,000
12/31/07 RE	<u>445,000</u>
Change in RE	\$ 80,000
Net income for 2008	\$135,000
Dividends = Net income - Change	<u>\$ 55,000</u>

6. C. F. Lee Inc. has the following income statement. How much after-tax operating income does the firm have?

Sales	\$2,850.00
Costs	1,850.00
Depreciation	<u>192.00</u>
EBIT	\$ 808.00
Interest expense	<u>285.00</u>
EBT	\$ 523.00
Taxes (35%)	<u>183.05</u>
Net income	<u>\$ 339.95</u>

- a. \$427.78   b. \$450.29   c. \$473.99   d. \$498.94   e. \$525.20

Answer: e

Sales	\$2,850.00
Costs	1,850.00
Depreciation	<u>192.00</u>
EBIT	\$ 808.00

Interest expense	285.00
EBT	\$ 523.00
Taxes: rate = 35%	183.05
Net income	<u>\$ 339.95</u>
EBIT	\$808.00
Tax rate	35%
EBIT(1 - T) =	\$525.20

7. Hartzell Inc. had the following data for 2007, in millions: after-tax operating income [EBIT (1-T)] = \$400; and cumulative depreciation = \$200. Information for 2008 is as follows: after-tax operating income [EBIT (1-T)] = \$466; and cumulative depreciation = \$210. How much free cash flow did the firm generate during 2008 if there is no change in capital expenditure and net working capital?

- a. \$383   b. \$425   c. \$476   d. \$514   e. \$676

Answer: b

$$\begin{aligned} \text{FCF} &= \text{EBIT} * (1 - \text{Tax Rate}) + \text{Depreciation} - \text{Capital Expenditures} - \text{Changes in Net Working Capital} \\ &= \$466 + (\$210 - 200) - 0 - 0 \\ &= \$425 \end{aligned}$$

8. Moose Industries faces the following tax schedule:

Taxable Income	Tax Base of Bracket	Percentage on Excess above Base
Up to \$50,000	\$0	15%
\$50,000-\$75,000	7,500	25
\$75,000-\$100,000	13,750	34
\$100,000-\$335,000	22,250	39

Last year the company realized \$500,000 in operating income (EBIT). Its annual interest expense is \$200,000. What was the company's net income for the year?

- a. \$9,874   b. \$63,025   c. \$199,750   d. \$560,000   e. \$890,500

Answer: c

Operating income	\$500,000
Interest expense	\$200,000

$$\begin{aligned} \text{Taxable income} &= \text{Operating income} - \text{Interest expense} \\ \text{Taxable income} &= \text{Operating income} - \text{Interest expense} \\ \text{Taxable income} &= \$300,000 \end{aligned}$$

Taxable Income	Tax on Base of Bracket	% on Excess above Base
\$0	\$0	15%
\$50,000	7,500	25%
\$75,000	13,750	34%
\$100,000	22,250	39%

$$\begin{aligned} \text{Tax on base} &= \$22,250 \\ \text{Tax on excess base} &= (\$300,000 - \$100,000) * 0.39 = 78,000 \\ \text{Tax liability} &= \$22,250 + \$78,000 = \$100,250 \end{aligned}$$

$$\begin{aligned} \text{Net income} &= \text{Taxable income} - \text{Taxes} \\ \text{Net income} &= \$ 199,750 \end{aligned}$$

9. A firm wants to strengthen its financial position. Which of the following actions would **increase** its quick ratio?

- Offer price reductions along with generous credit terms that would (1) enable the firm to sell some of its excess inventory and (2) lead to an increase in accounts receivable.
- Issue new common stock and use the proceeds to increase inventories.
- Speed up the collection of receivables and use the cash generated to increase inventories.
- Use some of its cash to purchase additional inventories.
- Issue new common stock and use the proceeds to acquire additional fixed assets.

Answer: a

a. You need to think about increasing either cash, marketable securities, or A/R

b ~ d. Increasing new inventories will decrease quick ratio

e. Acquiring additional fixed assets will have no effect on quick ratio. That is, the company can't increase its quick ratio

10. Cook, Inc. has a current ratio of 1.8x on current liabilities of \$200,000. The firm has \$36,000 of inventories. Cook, Inc is considering an expansion which would require a rapid increase in its inventories. The firm will issue notes payable and use those funds to buy new inventories to meet the inventory requirement for the expansion. Cook's debt holders specifies that it must maintain a quick ratio at least 1.20x, or else it may default. How much new inventory can Cook raise before it violates its bond contracts?

- a. \$70,000   b. \$80,000   c. \$90,000   d. 72,000   e. \$30,000

Answer: a

$$[(CA + x) - (INV + x)] / (CL + x) = (CA - INV) / (CL + x) = 1.20 \Rightarrow x = \$70,000$$

11. Which of the following statements is CORRECT?

- a. One disadvantage of organizing a business as a corporation rather than a partnership is that the equity investors in a corporation are exposed to unlimited liability.
- b. Using restrictive covenants in debt agreements is an effective way to reduce conflicts between stockholders and managers.
- c. Managers generally welcome hostile takeovers since the "raider" generally offers a price for the stock that is higher than the price before the takeover action started.
- d. The managers of established, stable companies sometimes attempt to get their state legislatures to impose rules that make it more difficult for raiders to succeed with hostile takeovers.
- e. The managers of established, stable companies sometimes attempt to get their state legislatures to remove rules that make it more difficult for raiders to succeed with hostile takeovers.

Answer: d

- a. Incorrect as it should be limited liability
- b. Creditors have nothing to do with a conflict between owners and managers.
- c and e are incorrect as managers do not like raiders as they can lose their jobs once the company is taken over by them.

12. You observe that a firm's ROE is above the industry average, but its profit margin and equity multiplier are both below the industry average. Which of the following statements is CORRECT?

- a. Its total assets turnover must be above the industry average.
- b. Its return on assets must equal the industry average.
- c. Its TIE ratio must be below the industry average.
- d. Its total assets turnover must be below the industry average.
- e. Its total assets turnover must equal the industry average.

Answer: a

Thinking through the DuPont equation, we can see that if the firm's PM and equity multiplier are below the industry average, the only way its ROE can exceed the industry average is if its total assets turnover exceeds the industry average. The following data illustrate this point:

	ROE =	PM	×	TATO	×	Eq. Mult.	ROA
Firm	30%	9%		2.0		1.67	18%
Industry	25%	10%		1		2.50	10%

The above demonstrates that a is correct, and that makes d and e incorrect.

Now consider the following:

$$\begin{aligned} \text{NI/Assets} &= \text{NI/Sales} \times \text{Sales/Assets} \\ \text{ROA} &= \text{PM} \times \text{TATO} \end{aligned}$$

If its ROA were equal to the industry average, then with its low debt ratio (hence low equity multiplier) its ROE would also be below the industry average. So b is incorrect. With its debt ratio below the industry average, its interest charges should also be low, which would increase its TIE ratio, making c incorrect.

13. Helmut Inc's latest net income was \$1,250,000, and it had 225,000 shares outstanding. The company wants to pay out 45% of its income. What dividend per share should it declare?

- a. \$2.14   b.\$2.26   c.\$2.38   d.\$2.50   e.\$2.63

Answer: d

Net income	\$1,250,000
Shares outstanding	225,000
Payout ratio	45%
EPS = NI/shares outstanding =	\$5.56
DPS = EPS × Payout % =	\$2.50

14. Fergie Inc, has a total asset turnover ratio of 4.0x and net annual revenue of \$48.5 million. It also has \$4.85 million of total debt. Find out the firm's times-interest-earned if the firm's total operating costs including depreciation and amortization is \$33.95 million and it pays 15% annual interest on its outstanding debt.

- a. 20.33x   b. 16.67x   c. 43.00x   d. 10.33x   e. 20.00x

Answer: e

$$\text{TIE} = \text{EBIT/Interest Expense} = (\$48.50 - \$33.95) / (\$4.85 \times 0.15) = 20.00x$$

15. Wie Corp's sales last year were \$315,000, and its year-end total assets were \$355,000. The average firm in the industry has a total assets turnover ratio (TAT) of 2.4. The firm's new CFO believes the firm has excess assets that can be sold so as to bring the TAT up to the industry average without affecting sales. By how much must the assets be reduced to bring the TAT to the industry average, holding sales constant?

- a. \$201,934   b. \$212,563   c. \$223,750   d. \$234,938   e. \$246,684

Answer: c

Sales	\$315,000
Actual total assets	\$355,000
Target TATO = Sales/Total assets =	2.40
Target assets = Sales/Target TATO =	\$131,250
Asset reduction = Actual assets - Target assets =	\$223,750

16. If your mark-up ratio is 25%, what is the margin ratio?