MBA Financial Management and Markets Exam 1 Spring 2010

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Directions: The following 33 questions are designed to test your knowledge of the basic financial markets definitions and concepts, financial statement analysis, financial forecasting, time value of money, and financial cash flows within the firm. Choose the best possible answer from those responses that are given to each question. Your completed exam will be due at the start of class on Monday, February 22, 2010.

True/False
Indicate whether the statement is true or false.

____ 1. If Firm A's business is to obtain savings from individuals and then invest them in financial assets issued by other firms or individuals, Firm A is a financial intermediary.

____ 2. The payment made each period on an amortized loan is constant, and it consists of some interest and some principal. The closer we are to the end of the loan's life, the greater the percentage of the payment that will be a repayment of principal.

____ 3. Suppose an investor plans to invest a given sum of money. She can earn an effective annual rate of 5% on Security A, while Security B will provide an effective annual rate of 12%. Within 11 years' time, the compounded value of Security B will be more than twice the compounded value of Security A. (Ignore risk, and assume that compounding occurs daily.)

____ 4. Net operating profit after taxes (NOPAT) is the amount of net income a company would generate from its operations if it had no interest income or interest expense.

____ 5. Its retained earnings is the actual cash that the firm has generated through operations less the cash that has been paid out to stockholders as dividends. Retained earnings are kept in cash or near cash accounts and, thus, these cash accounts, when added together, will always be equal to the firm's total retained earnings.

____ 6. The inventory turnover and current ratio are related. The combination of a high current ratio and a low inventory turnover ratio, relative to industry norms, suggests that the firm has an above-average inventory level and/or that part of the inventory is obsolete or damaged.

____ 7. The first, and most critical, step in constructing a set of pro forma financial statements is the sales forecast.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 8. Cheers Inc. operates as a partnership. Now the partners have decided to convert the business into a regular corporation. Which of the following statements is CORRECT?
   a. Assuming Cheers is profitable, less of its income will be subject to federal income taxes.
   b. Cheers will now be subject to fewer regulations.
   c. Cheers' shareholders (the ex-partners) will now be exposed to less liability.
   d. Cheers' investors will be exposed to less liability, but they will find it more difficult to transfer their ownership.
   e. Cheers will find it more difficult to raise additional capital.

____ 9. Which of the following statements is CORRECT?
   a. The proper goal of the financial manager should be to attempt to maximize the firm's expected cash flows, because this will add the most to the wealth of the individual shareholders.
   b. The financial manager should seek that combination of assets, liabilities, and capital that will generate the largest expected projected after-tax income over the relevant time

horizon, generally the coming year.

c. The riskiness inherent in a firm's earnings per share (EPS) depends on the characteristics of the projects the firm selects, and thus on the firm's assets. However, EPS is not affected by the manner in which those assets are financed.

d. Potential agency problems can arise between stockholders and managers, because managers hired as agents to act on behalf of the owners may instead make decisions favorable to themselves rather than the stockholders.

e. Large, publicly-owned firms like AT&T and GM are controlled by their management teams. Ownership is generally widely dispersed, hence managers have great freedom in how they manage the firm. Managers may operate in stockholders' best interests, but they may also operate in their own personal best interests. As long as managers stay within the law, there is no way to either force or motivate them to act in the stockholders' best interests.

____ 10. Which of the following bank accounts has the highest effective annual return?

a. An account that pays 8% nominal interest with monthly compounding.
b. An account that pays 8% nominal interest with annual compounding.
c. An account that pays 7% nominal interest with daily (365-day) compounding.
d. An account that pays 7% nominal interest with monthly compounding.
e. An account that pays 8% nominal interest with daily (365-day) compounding.

____ 11. Which of the following investments will have the <u>highest future value</u> at the end of 10 years? Assume that the effective annual rate for all investments is the same.

a. Investment A pays $250 at the <u>beginning</u> of every year for the next 10 years (a total of 10 payments).
b. Investment B pays $125 at the <u>end</u> of every 6-month period for the next 10 years (a total of 20 payments).
c. Investment C pays $125 at the <u>beginning</u> of every 6-month period for the next 10 years (a total of 20 payments).
d. Investment D pays $2,500 at the <u>end</u> of 10 years (a total of one payment).
e. Investment E pays $250 at the <u>end</u> of every year for the next 10 years (a total of 10 payments).

____ 12. Suppose you have $1,500 and plan to purchase a 5-year certificate of deposit (CD) that pays 3.5% interest, compounded annually. How much will you have when the CD matures?

a. $1,781.53
b. $1,870.61
c. $1,964.14
d. $2,062.34
e. $2,165.46

____ 13. Ten years ago, Levin Inc. earned $0.50 per share. Its earnings this year were $2.20. What was the growth rate in Levin's earnings per share (EPS) over the 10-year period?

a. 15.17%
b. 15.97%
c. 16.77%
d. 17.61%
e. 18.49%

____ 14. Your aunt is about to retire, and she wants to buy an annuity that will supplement her income by $65,000 per year for 25 years, beginning a year from today. The going rate on such annuities is 6.25%. How much would it cost her to buy such an annuity today?

a. $770,963.15
b. $811,540.16
c. $852,117.17

d. $894,723.02
e. $939,459.18

____ 15. You have a chance to buy an annuity that pays $550 at the beginning of each year for 3 years. You could earn 5.5% on your money in other investments with equal risk. What is the most you should pay for the annuity?
a. $1,412.84
b. $1,487.20
c. $1,565.48
d. $1,643.75
e. $1,725.94

____ 16. Your uncle has $500,000 invested at 7.5%, and he now wants to retire. He wants to withdraw $40,000 at the beginning of each year, beginning immediately. How many years will it take to exhaust his funds, i.e., run the account down to zero?
a. 23.16
b. 24.38
c. 25.66
d. 27.01
e. 28.44

____ 17. At a rate of 6.25%, what is the present value of the following cash flow stream? $0 at Time 0; $75 at the end of Year 1; $225 at the end of Year 2; $0 at the end of Year 3; and $300 at the end of Year 4?
a. $411.57
b. $433.23
c. $456.03
d. $480.03
e. $505.30

____ 18. Your uncle has $300,000 invested at 7.5%, and he now wants to retire. He wants to withdraw $35,000 at the beginning of each year, beginning immediately. He also wants to have $25,000 left to give you when he ceases to withdraw funds from the account. For how many years can he make the $35,000 withdrawals and still have $25,000 left in the end?
a. 11.98
b. 12.61
c. 13.27
d. 13.94
e. 14.63

____ 19. An investment costs $1,000 (CF at t = 0) and is expected to produce cash flows of $75 at the end of each of the next 5 years, then an additional lump sum payment of $1,000 at the end of the 5th year. What is the expected rate of return on this investment?
a. 6.77%
b. 7.13%
c. 7.50%
d. 7.88%
e. 8.27%

____ 20. East Coast Bank offers to lend you $25,000 at a nominal rate of 7.5%, compounded monthly. The loan (principal plus interest) must be repaid at the end of the year. Midwest Bank also offers to lend you the $25,000, but it will charge an annual rate of 8.3%, with no interest due until the end of the year. What is the difference in the effective annual rates charged by the two banks?
a. 0.93%
b. 0.77%
c. 0.64%
d. 0.54%
e. 0.43%

____ 21. Suppose you are buying your first house for $210,000, and are making a $20,000 down payment. You have arranged to finance the remaining amount with a 30-year, monthly payment, amortized mortgage at a 6.5% nominal interest rate. What will your equal monthly payments be?

a. $1,083.84
b. $1,140.88
c. $1,200.93
d. $1,260.98
e. $1,324.02

____ 22. Your child's orthodontist offers you two alternative payment plans. The first plan requires a $4,000 immediate up-front payment. The second plan requires you to make monthly payments of $137.41, payable at the end of each month for 3 years. What nominal annual interest rate is built into the monthly payment plan?

a. 12.31%
b. 12.96%
c. 13.64%
d. 14.36%
e. 15.08%

____ 23. Suppose you borrowed $12,000 at a rate of 9% and must repay it in 4 equal installments at the end of each of the next 4 years. How much would you still owe at the end of the first year, after you have made the first payment?

a. $7,636.79
b. $8,038.73
c. $8,461.82
d. $8,907.18
e. $9,375.98

____ 24. Below are the 2005 and 2006 year-end balance sheets for Wolken Enterprises:

Assets:	2006	2005
Cash	$ 200,000	$ 170,000
Accounts receivable	864,000	700,000
Inventories	2,000,000	1,400,000
Total current assets	$3,064,000	$2,270,000
Net fixed assets	6,000,000	5,600,000
Total assets	$9,064,000	$7,870,000
Liabilities and equity:		
Accounts payable	$1,400,000	$1,090,000
Notes payable	1,600,000	1,800,000
Total current liabilities	$3,000,000	$2,890,000
Long-term debt	2,400,000	2,400,000
Common stock	3,000,000	2,000,000
Retained earnings	664,000	580,000
Total common equity	$3,664,000	$2,580,000
Total liabilities and equity	$9,064,000	$7,870,000

Wolken has never paid a dividend on its common stock, and it issued $2,400,000 of 10-year non-callable, long-term debt in 2005. As of the end of 2006, none of the principal on this debt had been repaid. Assume that the company's sales in 2005 and 2006 were the same. Which of the following statements must be CORRECT?

a. Wolken increased its short-term bank debt in 2006.
b. Wolken issued long-term debt in 2006.
c. Wolken issued new common stock in 2006.

d. Wolken repurchased some common stock in 2006.
e. Wolken had negative net income in 2006.

____ 25. Tucker Electronic System's current balance sheet shows total common equity of $3,125,000. The company has 125,000 shares of stock outstanding, and they sell at a price of $52.50 per share. By how much do the firm's market and book values per share differ?
a. $27.50
b. $28.88
c. $30.32
d. $31.83
e. $33.43

____ 26. Hunter Manufacturing Inc.'s December 31, 2006, balance sheet showed total common equity of $2,050,000 and 100,000 shares of stock outstanding. During 2007, Hunter had $250,000 of net income, and it paid out $100,000 as dividends. What was the book value per share at 12/31/07, assuming that Hunter neither issued nor retired any common stock during 2007?
a. $20.90
b. $22.00
c. $23.10
d. $24.26
e. $25.47

____ 27. JBS Inc. recently reported net income of $4,750 and depreciation of $885. How much was its net cash flow, assuming it had no amortization expense and sold none of its fixed assets?
a. $4,831.31
b. $5,085.59
c. $5,353.25
d. $5,635.00
e. $5,916.75

____ 28. On 12/31/07, Heaton Industries Inc. reported retained earnings of $675,000 on its balance sheet, and it reported that it had $172,500 of net income during the year. On its previous balance sheet, at 12/31/06, the company had reported $555,000 of retained earnings. No shares were repurchased during 2007. How much in dividends did Heaton pay during 2007?
a. $47,381
b. $49,875
c. $52,500
d. $55,125
e. $57,881

____ 29. Last year Tiemann Technologies reported $10,500 of sales, $6,250 of operating costs other than depreciation, and $1,300 of depreciation. The company had no amortization charges, it had $5,000 of bonds that carry a 6.5% interest rate, and its federal-plus-state income tax rate was 35%. This year's data are expected to remain unchanged except for one item, depreciation, which is expected to <u>increase</u> by $750. By how much will net after-tax income change as a result of the change in depreciation? The company uses the same depreciation calculations for tax and stockholder reporting purposes.
a. –463.13
b. –487.50
c. –511.88
d. –537.47
e. –564.34

____ 30. Northwest Lumber had a profit margin of 5.25%, a total assets turnover of 1.5, and an equity multiplier of 1.8. What was the firm's ROE?
a. 12.79%

b. 13.47%
c. 14.18%
d. 14.88%
e. 15.63%

____ 31. Aziz Industries has sales of $100,000 and accounts receivable of $11,500, and it gives its customers 30 days to pay. The industry average DSO is 27 days, based on a 365-day year. If the company changes its credit and collection policy sufficiently to cause its DSO to fall to the industry average, and if it earns 8.0% on any cash freed-up by this change, how would that affect its net income, assuming other things are held constant?
a. $267.34
b. $281.41
c. $296.22
d. $311.81
e. $328.22

____ 32. Last year Urbana Corp. had $197,500 of assets, $307,500 of sales, $19,575 of net income, and a debt-to-total-assets ratio of 37.5%. The new CFO believes a new computer program will enable it to reduce costs and thus raise net income to $33,000. Assets, sales, and the debt ratio would not be affected. By how much would the cost reduction improve the ROE?
a. 9.32%
b. 9.82%
c. 10.33%
d. 10.88%
e. 11.42%

____ 33. Clayton Industries is planning its operations for next year, and Ronnie Clayton, the CEO, wants you to forecast the firm's additional funds needed (AFN). Data for use in your forecast are shown below. Based on the AFN equation, what is the AFN for the coming year? Dollars are in millions.

Last year's sales = S_0	$350	Last year's accounts payable	$40
Sales growth rate = g	30%	Last year's notes payable (to bank)	$50
Last year's total assets = A_0	$500	Last year's accruals	$30
Last year's profit margin = M	5%	Target payout ratio	60%

a. $102.8
b. $108.2
c. $113.9
d. $119.9
e. $125.9