1. The primary goal of a publicly-owned firm interested in serving its stockholders should be to
   a. Maximize expected total corporate profit.
   b. Maximize expected earnings per share.
   c. Minimize the chance of losses.
   d. **Maximize the value of the firm's equity.**
   e. Maximize expected net income.

2. The major advantage of a regular partnership or a corporation as a form of business is the fact
   that both offer their owners limited liability, whereas proprietorships do not.
   a. True  b. False

3. Errors in the sales forecast can be offset by similar errors in costs and income forecasts. Thus,
   as long as the errors are not large, sales forecast accuracy is not critical to the firm.
   Not graded

4. Other things held constant, which of the following will not affect the current ratio, assuming an
   initial current ratio greater than 1.0?
   a. Fixed assets are sold for cash.
   b. Long-term debt is issued to pay off current liabilities.
   c. **Equity is sold to pay off long term debt.**
   d. Cash is used to pay off accounts payable.
   e. A bank loan is obtained, and the proceeds are credited to the firm's checking account.

5. Considering each action independently and holding other things constant, which of the
   following actions would reduce a firm's need for additional capital?
   a. An increase in the dividend payout ratio.
   b. A decrease in the profit margin.
   c. **A decrease in the days sales outstanding.**
   d. An increase in expected sales growth.
   e. A decrease in the accrual accounts (accrued wages and taxes).

6. If a bank uses quarterly compounding for savings accounts, the nominal rate will be greater
   than the effective annual rate.
   a. True  b. False

7. List the four required financial statements required for external reporting purposes for publicly
   traded companies in the United States.
   **Income statement, Balance Sheet, Statement of Cash Flows, Statement of Retained
   Earnings.**

8. Which of the following statement is correct?
   a. A well diversified portfolio diversifies essentially all market risk of a stock.
   b. A well diversified portfolio diversifies essentially all risk of a stock.
   c. **A well diversified portfolio diversifies essentially all firm-specific risk of a stock.**
   d. A well diversified portfolio guarantees that you will receive at least the risk-free rate.
   e. A well diversified portfolio maximizes the ratio of firm-specific risk to market risk.
9. Kathy wants sell her Merck stock and replace it in her well-diversified 401K portfolio with Exxon-Mobil. The weight of Exxon-Mobil in the portfolio will be the same as the current weight of Merck. The five-year monthly standard deviation of returns for Merck is 9.06%, and the five-year monthly standard deviation of returns for Exxon-Mobil is 5.29%. Merck has a market capitalization of $107.02B, a P/E of 16.48, and a beta of 0.316. Exxon-Mobil has a market capitalization of $280.85B, a P/E of 13.49, and a beta of 0.422. According to portfolio theory and the SLM (CAPM), if Kathy replaces Merck with Exxon-Mobil what will be the effect on the relevant risk of the portfolio?
   a. The relevant risk will increase because Exxon-Mobil has a higher market capitalization.
   b. The relevant risk will decrease because Exxon-Mobil has a lower standard deviation
   c. The relevant risk will increase because Exxon-Mobil has a higher beta.
   d. The relevant risk will decrease because Exxon-Mobil has a higher beta.
   e. The relevant risk will decrease because the P/E-to-beta ratio is lower for Exxon-Mobil

10. The risk-free security has a beta equal to ______________, while the market portfolio’s beta is equal to ______________.
    a. one; more than one.
    b. one; less than one.
    c. zero; one.
    d. zero; more than zero.
    e. less than zero; more than zero.

11. (4 points, circle the correct answer) Interpret the below ratios by performing a historical analysis.
    2005  2006  Industry  This ratio is:
    Current Ratio     2.5    3.3    3.8  better than------worse than
    Days Sales Outstanding 31  37  35  better than------worse than
    Return on Assets  7.7%   6.2%  5.1%  better than------worse than
    P/E     10.2  11.3  15.0  better than------worse than

12. The nominal rate of interest is defined as the sum of the nominal risk-free rate of return and the expected inflation rate.
    a. True    b. False

Instructions:
1) The part of the exam is open book and open notes.
2) Point values are listed with the question.
3) Show your work in order to have the possibility of partial credit.
4) Each question is worth 5 points, unless otherwise marked.

1. To the nearest $.01, you will receive $1,678,445 in 28 years, what is the present value at a nominal discount rate of 5.13%?
   \( FV= 1,678,445, \ n= 28 \ \text{years}, \ i=5.13, \ \text{pmt}= 0 \ \text{and compute} \ \text{pv} = 413580.9354 \)

2. You plan to make 20 annual deposits of $500, with the first deposit made today, what is the value of your deposit at the end of 20 years assuming an interest rate of 8.4%?
   \( N=20, \ \text{pmt}=$500, \ \text{Begin mode}, \ \text{I}= 8.4, \ \text{PV}=0, \ \text{and compute} \ \text{FV}=25929.76639 \)

3. What is the present value, assuming a nominal rate of 5.65%, of the following cash flows; Year 0=-1300, Years 1-4=300, Years 5-6=400, Year 7=500, Year 8=1100?
   \text{T183 solution, NPV(5.65, -1300,\{300,400,500,1100\},\{4,2,1,\})}
   \text{NPV=1388.4154}
4. You plan to purchase a house for $200,000 at a 6% nominal annual interest rate with monthly payments for 20 years. Payments are made at the end of the month. Which of the following is closest (within $50) to the amount of interest that will be paid with your 80th payment?
   a. $200.  b. $400.  c. $600.  d. $800.  e. $1,000

1. Compute payment, pv=200000, i=6/12=.5, n=20*12=240, fv=0 and pmt=-1432.8621
2. Without clearing calculator, change n=79 and compute FV =-158192.1035, this is the amount due after 79 payments.
3. This becomes the beginning balance in period 80, multiply this begin balance times interest rate to find interest portion of 80th payment, 158192*.5%=790.96. thus answer is D.

5. Tripart Corp. has a return on equity of 18%, a return on assets of 6%, and a total assets turnover of 4 times. The company’s profit margin is closest to
   a. 0.5%  b. 1.0%  c. 1.5%  d. 2.0%  e. 2.5%
   Since no numbers are listed in the problem, assign 100 to any value. I let assets = 100.
   thus with ROA, Net Income = 6, With Total Assets turnover, Sales = 400. Profit margin = net income /sales = 6/400=1.5%, =C.

6. You can purchase an annuity that pays $100.00 per year for 5 years. The first payment will be received exactly one year from today. If you consider the annuity exactly as risky as your bank account that pays 8.00% interest, compounded quarterly, what is the most you would be willing to pay for the annuity?
   a. $408.79  b. $379.08  c. $396.72  d. $471.34  e. $610.51
   Two way, one is to convert 8% to effective rate of I=8.243, the n=5, pmt=100, fv=0, and solve for PV, other way is as uneven cash flow problem.

7. Assume that the risk free rate is 7%, and the market risk premium is 8%. Also assume that after careful analysis, you believe that American Media Group (AMG) common stock will return 17% next year. The beta for the stock is 1.5. According to the CAPM and SML:
   a. AMG common stock is underpriced relative to its equilibrium price.
   b. AMG common stock overpriced relative to its equilibrium price.
   c. The price of AMG common stock is equal to its equilibrium price.
   d. It is not possible to tell whether AMG common stock is underpriced or overpriced, all you know is that the price of AMG common stock is not equal to its equilibrium price.
   e. Nothing can be told about the price of AMG stock because the CAPM and SML have nothing to do with the price of a security, all these models do is relate risk and return.
   Required return is 19%, you expect 17%, so given the current price you are not getting a fair return. Price down implies rate up, so the price would need to go up to be fairly priced.

9. New Hampshire Services reported $2.3 million of retained earnings on its 2004 balance sheet. In 2005, the company lost money—its net income was -$500,000 (negative $500,000). Despite the loss, the company still paid a $1.00 per share dividend. The company's earnings per share for 2005 were -$2.50 (negative $2.50). What was the level of retained earnings on the company’s 2005 balance sheet?
   a. $1.2 million  b. $1.6 million  c. $1.8 million
   d. $2.6 million  e. $2.8 million
   2.3-.5(net income)+.2(dividend)=1.6. Get the dividend by using the net income to find the number of shares.

10. Using the below Income Statement and Balance Sheet, you are to fill in the missing numbers. Cash________, Inventory 75, Accrued Wages 95, Notes Payable (short-term) 76, Total Assets________, Net Fixed Assets________, Long-Term Debt 125, Total Liabilities and
Owners Equity 600, Retained Earnings ________, Common Stock 100, Total Current Assets 225, Total Current Liabilities ________. (2 points each).

Cash - ___150______________.

Net Fixed Assets - ____375______________.

Total Assets - ________600__________.

Total Current Liabilities - ___171_______________.

Retained Earnings - _____204______________.

USE THE INFORMATION BELOW TO ANSWER QUESTIONS 11 and 12

Consider three securities with expected returns, standard deviations and betas given by:

<table>
<thead>
<tr>
<th></th>
<th>Expected Return</th>
<th>Standard Deviation</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock A</td>
<td>21%</td>
<td>30%</td>
<td>1.5</td>
</tr>
<tr>
<td>Stock B</td>
<td>26%</td>
<td>40%</td>
<td>2.0</td>
</tr>
<tr>
<td>Stock C</td>
<td>14%</td>
<td>20%</td>
<td>0.8</td>
</tr>
</tbody>
</table>

The correlation coefficient between Stock A and Stock B is 0.30, the correlation coefficient between Stock A and Stock C is 0.65 and the correlation coefficient between Stock B and Stock C is –0.10. Assume that Stock A, Stock B and Stock C are in equilibrium (i.e., for all three stocks, the expected rate of return is equal to the required rate of return) and that the expected return on the market is 16 percent.

11. According to the information given above, what is the risk free rate of interest?
   a. 5 percent
   b. **6 percent**
   c. 7 percent
   d. 8 percent
   e. There is not enough information provided to answer this question.

12. Regardless of your answer to the above question, assume the risk free rate is 6.5%. What is the beta of a portfolio comprised of 20 percent of Stock A, 40 percent of Stock B, 30 percent of Stock C and 10 percent of the risk free security?
   a. 1.00
   b. **1.34**
   c. 1.54
   d. 1.65
   e. There is not enough information provided to answer this question.