1. Which of the following appears to be the most appropriate goal for corporate management?
   A. Maximizing market value of the company's shares.

2. The __________ the time to maturity for a bond, the __________ is its price change in response to a given change in interest rates.
   b. Longer; greater

3. If its yield to maturity is less than its coupon rate, a bond will sell at a ________, and increases in market interest rates will ________.
   c. premium (i.e., greater than par value), decrease this premium.

4. The expected return on a common stock is composed of:
   C. both dividend yield and capital appreciation.

5. What is the best method of calculating a stock's required rate of return? Why?
   CAPM, best theory link between risk and return.

6. The Weighted Average Cost of Capital typically uses the coupon rate of a firm's existing debt as the pre-tax cost of debt.
   b. False

7. In capital budgeting and cost of capital analyses, the firm should always consider retained earnings as the first source of capital, since this is a free source of funding to the firm.
   b. False

8. List the reinvestment rate assumption for the following capital budgeting methods (1 point each).

   Reinvestment rate assumption
   Net Present Value = WACC
   Internal Rate of Return = IRR
   Payback Period = none

9. If two normal, independent projects offer the same, positive NPV, then:
   D. they add the same amount to the value of the firm.

10. Other things held constant, which of the following would likely increase the NPV of a project being considered?
    e. A decrease in the discount rate associated with the project.

11. The following table lists the capital budgeting analysis of four different, independent projects with an equal life:

<table>
<thead>
<tr>
<th>Project</th>
<th>NPV</th>
<th>IRR</th>
<th>Cost of Capital (based on project’s beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$3,000</td>
<td>10.5% and 17%</td>
<td>12%</td>
</tr>
<tr>
<td>B</td>
<td>$5,050</td>
<td>13.4%</td>
<td>12%</td>
</tr>
<tr>
<td>C</td>
<td>$4,800</td>
<td>14.4%</td>
<td>12%</td>
</tr>
<tr>
<td>D</td>
<td>$3,100</td>
<td>21.5%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Which project(s) should you choose? e. A, B, C, and D, since all have NPV>0
1. (4 points) A firm issued 25-year $1,000 par value bonds ten years ago at par. At that time, the market rate for such bonds was 9%. Today these bonds are selling for $1,100. Coupon is paid annually. What is the yield to maturity for these bonds today?

7.85%

2. (4 points) Cold Boxes Ltd. has 100 bonds outstanding (maturity value = $1,000). The nominal required rate of return on these bonds is currently 10 percent, and interest is paid semiannually. The bonds mature in 5 years, and their current market value is $768 per bond. What is the annual coupon interest rate?

3.99%

3. (4 points) Chadmark Corporation is expanding rapidly, and it currently needs to retain all of its earnings, hence it does not pay any dividends. However, investors expect Chadmark to begin paying dividends, with the first dividend of $0.65 coming 2 years from today. The dividend should grow rapidly, at a rate of 40 percent per year, during Years 3 and 4. After Year 4, the company should grow at a constant rate of 8 percent per year. If the required return on the stock is 13 percent, what is the value of the stock today?

$18.79

4. (4 points) Pern Corp. just paid an annual dividend of $1.30. Dividends are expected to grow at a constant rate forever. The price of the stock is currently $26.00. The required rate of return for this stock is 14 percent. What is the expected growth rate of Pern’s dividend?

8.57%

5. Stroller Corporation is constructing its Cost of Capital schedule. The firm is at its target capital structure. Its bonds have a 7 percent coupon, paid semiannually, a current maturity of 15 years, and sell for $956. Stroller is a constant growth firm, which just paid a dividend of $1.20, sells for $23.65 per share, and has a growth rate of 4.1 percent.

The firm’s tax rate is 35% and Stroller’s book value balance sheet is as follows:

<table>
<thead>
<tr>
<th>Asset</th>
<th>$25,000</th>
<th>Long Term Debt</th>
<th>$15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity ($1.00 par)</td>
<td>$1,500</td>
<td>Retained Earnings</td>
<td>$8,500</td>
</tr>
</tbody>
</table>

a. (4 points) Stroller’s weight of debt that should be used when calculating the firm’s WACC is within 5% of which of the below numbers?

a. 30%

b. (3 points) Stroller’s pre-tax cost of debt is closest to:

a. 7.50%

c. (4 points) Stroller’s cost of equity is closest to:

a. 9.4%

d. (3 points) Stroller’s Weighted Average Cost of Capital is closest to:

b. 8.0%
6. NYT Corporations is considering a project that will pay nothing for the first five years, $40,000 in the sixth year, $80,000 in the seventh year, $120,000 in the eighth year, $160,000 in the ninth year, and $200,000 in the tenth year. The appropriate discount rate is 8.5% and the project requires an investment tomorrow of $250,000 if we accept the project.

a. (3 points) The payback period for this investment is e. between 8 and 9 years.

b. (4 points) What is the IRR for this investment? 10.74%

c. (4 points) What is the NPV of this project? $47430

d. (2 points) Should we accept the project? Why or why not? Yes, NPV is positive

7. Due to expected increases in sales, the Target Copy Company is contemplating purchasing a new printing machine costing $1620. The machine has an estimated salvage value in year 3 of $75. Shipping costs of the equipment are $63 and installation costs are $52. To accommodate the new sales, the company will need to purchase additional inventory of $27, part of which will be financed by an increase in accounts payable of $16. Annual sales are expected to increase by 1143, which will create accounts receivable equal to 6% of annual sales. Target's corporate tax rate is 33 percent. Working capital will return to normal levels at the end of the project.

Variable operating costs directly associated with the new machine (excluding depreciation, overhead, sunk costs, and opportunity costs) will be 42 percent of sales. Corporate Headquarters charges an overhead expense equal to 6% of annual sales, without regard for actual changes in Corporate Headquarters’ expense levels. Due to the size of the machine, we must close the Coffee Kiosk that generates $40 in net annual pre-tax operating profits. Operating cash inflows will begin 1 year from today (at Time 1).

The machine is in the 3-year MACRS class. The MACRS class has depreciation of 33% in year 1, 45% in year 2, 15% in year 3, and 7% in year 4. The company has a 36 percent tax rate, enough taxable income from other assets to enable it to get a tax refund from this project if the project's income is negative, and a 10 percent cost of capital. Inflation is zero.

What is the IRR for this machine? 1 point for the IRR and 14 points for demonstrating how you calculated the IRR.

3.58%, Reject project

Check figures, 0=-1814.58, 1=604.79, 2=679.75, 3=492.37+171.30