1. According to the text, the primary goal for a firm’s financial managers is to maximize shareholder's wealth.
   a. True

2. 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.

3. You are considering two bonds. Both are rated double A (AA), both mature in 20 years, both have a 10 percent coupon, and both are offered to you at their $1,000 par value. However, Bond X has a sinking fund while Bond Y does not. This is probably not an equilibrium situation, as Bond X, which has the sinking fund, would generally be expected to have a higher yield than Bond Y.
   b. False

4. The constant dividend growth model may be used to find the price of a stock in all of the following situations except:
   d. when the expected dividend growth rate is greater than the discount rate.

5. Which of the following is correct about the price of a company's stock?
   I Investors pay a higher price the larger the dividend growth rate
   II Investors pay a higher price the less risky the company's stock
   III Investors pay a higher price the lower the level of interest rates
   e. I, II, and III

6. You observe a stock selling for $30. A one month option with an exercise price of $35 is currently selling for $1.35. This option is a (n):
   a. out of the money call.

7. (6 points) There are several real options built into the design of FINC 6532. Describe two real options in the course. Give enough detail to assure me that you understand the concept of real options. Be sure to list such items as who is long, who is short, the asset, the exercise price, etc.

   Option-Drop lowest quiz grade, type-put, long-student, short-professor, asset-lowest grade on quiz, exercise price-average grade on quiz without low grade
   Option-not do any work on group project, type-put or call, long-student, short-other group members, asset-for call, grade on project as done by group, exercise price-grade on project if student had to do it on own

   Examples of others answers: Attend Class, Find a date, improve life with finance knowledge, miss a class to do something else (e.g. beta gamma sigma banquet), make professional contacts, sell your product to other students, and many others

8. 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

9. 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
10. For a normal, above-average risk (by any measure) capital budgeting project, the Net Present Value criteria assumes that expected future cash flows are reinvested at _________, and the Payback Period criteria assumes that expected future cash flows are reinvested at _________.
(a) A rate above the firm’s weighted average cost of capital, no discount rate is used.

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

12. 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.

13. Consider the following independent projects, for a firm using a discount rate of 10%:

<table>
<thead>
<tr>
<th>Project</th>
<th>Initial Investment</th>
<th>NPV</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$1,000,000</td>
<td>$100,000</td>
<td>10.2%</td>
</tr>
<tr>
<td>B</td>
<td>$100</td>
<td>$1</td>
<td>11%</td>
</tr>
<tr>
<td>C</td>
<td>$50,000</td>
<td>$70,000</td>
<td>23%</td>
</tr>
<tr>
<td>D</td>
<td>$200,000</td>
<td>$24,000</td>
<td>13%</td>
</tr>
</tbody>
</table>

Which project(s) should the firm accept?
   e. The firm should accept all of these projects.

14. Which of the following statements is most correct concerning a project with normal cash flows (i.e., a cash outflow in Year 0 followed by cash inflows in all subsequent years)?
   d. If the NPV of a project is zero, then the IRR of the project will be equal to the discount rate for the project.

15. Pickles Corp. is a company which sells bottled iced tea. The company is thinking about expanding its operations into the bottled lemonade business. Which of the following factors should the company incorporate into its capital budgeting decision as it decides whether or not to enter the lemonade business?
   e. Answers a and c are correct.

16. According to the Modigliani and Miller model of capital structure, in a world of corporate taxes (but no bankruptcy costs), the optimal debt ratio for a company is which of the following?
   c. 100%

17. Ridgefield Enterprises has total assets of $300 million. The company currently has no debt in its capital structure. The company’s basic earning power is 15 percent. The company is contemplating a recapitalization where it will issue debt at 10 percent and use the proceeds to buy back shares of the company’s common stock. If the company proceeds with the recapitalization, its operating income, total assets, and tax rate will remain the same. Which of the following will occur as a result of the recapitalization?
   d. The first and second answers are both correct.

Final Exam  Spring 2007      FINC 6532   Your Name _______________________

1. (5 points) A twenty-five year, 6 percent bond is making coupon payments on a semi-annual basis and has the normal face value. If the yield to maturity for this bond is 5.45 percent what is the price of the bond?
   1074.61
2. (5 points) A new firm is expected to earn and pay nothing to the common stockholders for the next 2 years. Dividend distributions are projected to be $0.50 per share at the end of the third, $0.75 at the end of the fourth year, and are then expected to grow at 6 percent forever. If a potential investor required a 20% return to invest in this stock, then the value of the stock according to the appropriate model in the course will be:

3.39

3. (4 points) Suppose you can buy a call option on a piece of land. The land is currently valued at $50,000. In one year, the land will be either worth $60,000 or worth $25,000. The exercise price of the option is $53,000 and the riskless rate of return is 5%. What is the value of the call option today?

5238

4. (3 points) You are long a call with a $2,000 exercise price. On the day the option expires, the underlying asset is selling for $2,700. What is your correct strategy and what is your expected profit/loss from following this strategy.

Exercise call, +700

5. (3 points) You are short a put with a $1,200 exercise price. On the day the option expires, the underlying asset is selling for $800. What is your correct strategy and what is your expected profit/loss from following this strategy.

No strategy, -400

6. A company’s balance sheets show a total of $30 million long-term debt with a coupon rate of 9 percent. The debt was issued at par with semi-annual coupons, has a yield to maturity of 11.11 percent, and the debt has matures at the end of nine years. The balance sheets also show that the company has 10 million shares of stock; the total of common stock and retained earnings is $30 million. The current stock price is $6.50 per share. The firm just paid a dividend of $0.35 (that is, Do = 0.35) and dividends are expected to grow at a constant annual rate of 6.3% forever. The tax rate is 40%.

(3 points) The firm’s weight of debt used in calculating the WACC is closest to:
   a. 30%

(3 points) The cost of equity that should be used in calculating the WACC is closest to:
   e. 12%

(3 points) Regardless of your answer for number 5, assume the firm has a target capital structure of 40 percent debt and 60 percent equity. Based on this target capital structure, and the above information pertaining to debt and equity, what is the firm’s WACC?
   a. 9.9%

7. NYT Corporations is considering a project that will pay nothing for the first three years, $40,000 in the fourth and fifth years, $70,000 in the sixth year, $80,000 in the sixth year, $20,000 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 $275,000 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? Should we accept the project? 10.61. Accept
c. (4 points) What is the NPV of this project? Should we accept the project? +44216.27, Accept

8. Exterra Inc. is providing satellite communication services to Radio-/TV stations as well as to governments all over the world. Over the last years the company has successfully launched many geosynchronous as well as non-geosynchronous satellites, and most of them are operating at or close to full capacity.

A new generation of satellites would allow Exterra Inc. to improve its services. Therefore the company is evaluating the replacement of a group of geosynchronous satellites. The existing old satellites have current book value of $50,000,000 and they are being depreciated over the next three years on a straight line basis to a salvage value of $5,000,000 (i.e. the annual depreciation on the old satellites is $15,000,000 per year). Those existing satellites could be sold today to a competitor for $40,000,000. If Exterra Inc. does not replace the old technology, the company estimates that it would be worth $10,000,000 three years from today.

The new group of satellites would cost $120,000,000 (purchase price plus launch) and would increase revenues (before taxes) by $30,000,000 per year. The satellites are expected to be used for 3 years, and then sold for 60% of the purchase price. The satellites are depreciated according to the 7-years MACRS class (14%, 24%, 17%, 12%, 10%, 9%, 9%, 5%). If the old satellites were going to be replaced, this would require an immediate $10,000,000 increase in net working capital, which would revert to its previous level at the end of 3 years. The firm’s marginal tax rate is 30% and the project’s cost of capital is 16%.

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

NPV=8.37, Accept

Check figures, 0=–87, 1=21.54, 2=25.14, 3=22.692+68.10