YOUR NAME ____________________________________ EXAM 3 FINC 4531 FALL 2007
YOU HAVE 120 MINUTES TO COMPLETE BOTH PARTS OF THIS EXAM

Instructions:
1) The part of the exam is closed book and closed notes. No scrap paper is allowed; use the back of the exam if necessary.
2) Partial points are based on readily observable evidence that you know at least part of the solution concept. The more evidence presented (and the clearer the evidence), the better the chance for partial points. In other words, SHOW ALL WORK!
3) If you have additional time remaining, give your work one last check.
4) True/False questions are worth 2 points. Multiple-choice questions are worth 3 points. Short answer/Fill in the Blanks questions usually take less than three sentences and are worth 4 points.

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

2. (2 points each, all or none on grading) Real Options – fill in the blanks. If you need to describe the option more fully, write your description near the question. For the record, the type of option is either call or put. The underlying asset refers to the item that, upon a change in value, will affect the decision to exercise or not exercise the option. Write additional information if you feel it is needed to explain your answer.

a. Firm is planning a stock Initial Public Offering where currently all common stock where all stock is owned by an owner/manager.

Type of option ______ Who is long _________Who is short ___________Underlying Asset _________

Exercise Price ___________

b. Use of an efficient specialized machine with no salvage value versus a less-efficient general machine with large salvage value.

Type of option ______ Who is long _________Who is short ___________Underlying Asset _________

Exercise Price ___________

c. A friend is taking FI 4531 next term. She makes a binding offer to buy your FI 4531 textbook for $25.

Type of option ______ Who is long _________Who is short ___________Underlying Asset _________

Exercise Price ___________

d. A different friend, who always follows through on her commitments, works in the Department of Accounting and Finance. She offers to sell you the answer key to the FI 4531 final for $100.

Type of option ______ Who is long _________Who is short ___________Underlying Asset _________

Exercise Price ___________

3. Two investment opportunities have the same total cash flows. This means that with a discount rate of 0%, their cash flows have the same sum. Choose the combination from the following three aspects of capital budgeting that will give the highest Internal Rate of Return (hint, change each of the aspects one at a time, assume the projects are identical except for this change). CHOOSE THE BEST ANSWER.

Payback Period	Depreciation (to zero salvage value)	Cost of Financing
1. shortest	4. straight line	7. high cost
2. longest	5. MACRS	8. low cost
3. doesn't matter	6. does not matter	9. doesn't matter

a. 3, 6, 9. b. 1, 5, 8. c. 1, 5, 9. d. 2, 4, 7. e. 3, 4, 7. f. 2, 6, 8.

4. 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.
(b) A rate above the firm's weighted average cost of capital, the accounting rate of return.
(c) The internal rate of return, the rate below the firm's weighted average cost of capital.
(d) The firm's weighted average cost of capital, The accounting rate of return.
(e) The accounting rate of return, the accounting rate of return.
(e) Neither criterion assumes reinvestment of future cash flows.

5. Which of the following is considered <u>the most</u> important responsibility of the financial managers of a corporation?

a. liquidity management b. operations management c. capital budgeting
d. capital structure e. dividend policy

6. For an all equity firm, investments with NPV=$0:
a. typically has positive accounting profits. b. are generally high risk.
c. will generally have low discount rates. d. all of the above.

7. For a long-term capital budgeting project, expensing an item rather than capitalizing an item will most likely not affect the project's total net income over the life of the project. However, expensing the item will reduce the project's calculated Payback Period and increase the Internal Rate of Return.

a. True B. False

8. Real option-based analysis is better than static (or standard) NPV analysis because

a. real options analysis underestimates the true value of the project.
b. real options can be traded in financial markets.
c. real options analysis includes adjustments that a firm can make after a project is accepted.
d. real option analysis is based on discounted cash flow based techniques.
e. it is easier to implement in the real world.

9. Two of your classmates are evaluating a project with the following net cash flows:

Year	Cash Flow
0	-$ 10,000
1	$100,000
2	-$100,000

One classmate says that the project has an IRR of between 12 and 13%. The other classmate calculates an IRR of just under 800%, but fears his calculator's battery is low and may have caused an error. You agree to settle the dispute by analyzing the project cash flows. Which statement best describes the IRR for this project?

a. There is a single IRR of approximately 12.7 percent.
b. This project has no IRR, because the NPV profile does not cross the X-axis.
c. This project has two imaginary IRRs.
d. There are an infinite number of IRRs between 12.5 percent and 790 percent that can define the IRR for this project.
e. There are multiple IRRs of approximately 12.7 percent and 787 percent.

10. On the day an option expires, you observe a stock price of $ 44, an exercise price of $50, and an exercise value/option price of $6. If investors are rational, this option must be:

a. an in-the-money call. b. an in-the-money put.
c. an at-the-money call. d. an at-the-money put.
e. an out-of the money call. f. an out of the money put.

11. A company estimates that an average-risk project has a WACC of 10 percent, a below-average-risk project has a WACC of 8 percent, and an above-average-risk project has a WACC of 12 percent. Which of the following independent projects should the company accept?

a. Project A has average risk and an IRR = 9 percent.
b. Project B has below-average risk and an IRR = 8.5 percent.
c. Project C has above-average risk and an IRR = 11 percent.
d. All of the projects above should be accepted.
e. None of the projects above should be accepted.

12. Suppose you are a sole proprietor (a firm's only owner) and thus have unlimited liability for the firm's debts. Your firm has a significant amount of debt. You incorporate your company and as a stockholder have limited liability for the firm's debts. By incorporating, you would increase the value of your put option on the firm's assets.

a. True b. False

13. Briefly discuss why soft capital rationing and post-audits may be viewed as substitutes.

14. The overall process of capital budgeting can be broken down into five steps as a project moves from idea to reality. Name the most important step and briefly discuss why it is the most important.

15. (3 points) Strategic NPV = ________________________ + _____________________________

+ ____________________________________ + ____________________________ (note you may not need all of the blanks)

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

Project	Initial. Investment	NPV	IRR
A	$1,000,000	$52,000	5.2% and 57%
B	$100	$27	11%
C	$250,000	$103,000	23%
D	$200,000	$24,000	13%

Which project(s) should the firm accept?

a. Project A b. Project B c. Project C d. Project D

e. The firm should accept all of these projects.

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1. (4 points) Suppose you believe that Du Pont's stock price is going to decline from its current level of $82.50 sometime during the next 5 months. For $510.25 you could buy a 5-month put option giving you the right to sell 100 shares at a price of $83.00 per share. If you bought a 100-share contract for $510.25 and Du Pont's stock price actually dropped to $63.00, your expected profit or loss would be:

2. (4 points) The current price of a used textbook is $22. In one year, the price will be either $27 or $17. The nominal annual risk-free rate is 6 percent. What is the price of a call option on the textbook that has an exercise price of $22 and that expires in one year, rounded to the nearest dollar?

3. (4 points) The current price of a pair of jeans is $50 and the annual risk-free rate is 6 percent. A call option with an exercise price of $55 and one year until expiration has a current value of $7.20. What is the value of a put option (to the nearest dollar) written on the pair of jeans with the same exercise price and expiration date as the call option?

4. (4 points) Consider the cash flow series shown in the table below. As you will note, cash flow 5 is missing. Find the missing Year 5 cash flow that will make the present value of the cash flows equal to $1000 given a nominal discount rate of 7.7 percent.

Year	Cash Flow
0	-$884
1	$416
2	$584
3	-$370
4	$1214
5	$????

5. (4 points each) Consider the following cash flows, with a discount rate of 10%.

Year	Cash Flow
0	-$884
1	$416
2	$584
3	-$370
4	$1214
5	$400

a. What is the payback period? Based only on this decision rule, should the firm accept the project?

b. What is the Internal Rate of Return? Based only on this decision rule, should the firm accept the project?

6. (5 points) consider the projects shown below. If you were hard capital rationed to $88 for the initial investment, which project(s) should you choose?

Project:	A	B	C	D	E	F	G	H	I
Initial Cost:	16	21	24	30	34	41	42	11	12
NPV:	2.5	1.3	1.5	3.2	3.9	2.1	3.1	-.7	-1.9

7. **Using the information below, what is Lindsay Lohan's NPV for this project?**

After her movie "I Know Who Killed Me" failed at the box office, Lindsay Lohan has decided her movie career is over. She is looking for another line of work. She has been approached by a developer, Steve Wynn of Wynn Resorts, about opening the Lindsay Lohan Drug Rehabilitation Center and Halfway House. The Rehab Center would be located on the Las Vegas Strip inside the Wynn Resort. Wynn plans to operate the Lohan Center for six years. At that point, Wynn will retrofit the Center to exploit some other starlet in the news.

For the next six years, Lindsay will receive an annual fee of $500,000 for giving her name to the Center. As a condition of receiving her annual fee, she must need to attend rehab at least one time per year. To induce the need for a lifetime of drug and alcohol addition, Lindsay will need to consume $400,000 of drugs and alcohol. Groupies will provide 70% of the drugs for free and Lindsay has thus far spent $40,000 of her own money on drugs and alcohol. The amount of drugs and alcohol she needs to consume to induce the need for each additional rehab visit is about $50,000. In addition, after the Lohan Center closes, Wynn will continue to fund Lohan's rehabilitation treatments (i.e., she will receive lifetime free treatments). She currently spends $70,000 per rehab visit and expects to average 3 visits per year for the rest of her life. Lindsay's best guess is that she will live another 14 years. The drugs, alcohol, and Rehab are all tax-deductible expense.

Lindsay has other businesses ventures in which she will directly supervise. One is her perfume line. Her biggest seller is, "Fire down Below" (other names were considered and rejected). If she signs with Wynn, each rehab room will have complementary bottles of "Fire Down Below" for guests. The value of the increased perfume sales and advertising are worth $100,000 per year to Lindsay[1].

The Center will cost $20,000,000 to construct, and will be depreciated using the 7-year MACRS schedule. Revenues are expected to be $15,000,000 in the first year and decline by 15% per year until the project ends. Operating costs (excluding depreciation, fixed costs, and fees paid to Steve, Lindsay, and Michael) will run 40% of sales. Other Fixed Costs are $1,500,000 per year. Wynn receives a management fee for all projects he develops. Even though he will do nothing for the project, he will take a management fee of $500,000 per year. The Center will have no salvage value. To operate the center, working capital will increase by $2,500,000 and will return to normal when the project ends. Wynn feels the Center will benefit his Resort in other ways. Groupies, and family members, of the rehab center's patients should increase the pre-tax profits of Wynn Resorts by $4,000,000 per year. Additional publicity from photographs of famous patients is worth about $250,000 per year to Wynn Resorts.

Steve Wynn has insisted that Lindsay's father, Michael, will be hired to run the Halfway House part of the Center. His six year's in prison and halfway houses makes him somewhat qualified for the business. He will make $200,000 per year. Lindsay has currently has nothing to do with her father, but Steve Wynn likes the ability to always say that "Lohan is here every day."

There are various interest rates and discount rates that are possible for this project. Steve Wynn feels his relevant cost of capital is 16%. Lindsay Lohan believes her relevant cost of capital is 11%. Wynn Resorts management feels their relevant cost of capital is 9%. The project will be mostly financed using industrial development bonds with a coupon rate of 5.1%. These bonds will be sold at par. The relevant tax rate for everyone involved is 35%.

To accept this contract, Steve has told Lindsay, "Just keep on doing what you are doing."

Use this page to document your work. Should Lindsay do the project? ________ (1 point for the correct answer and 23 points for showing your work on how you determined the answer)

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[1] Other businesses Lindsay is considering include a fire truck manufacturing company, a driving school, an invisible lingerie company, and a software project codenamed "Snorters."

Work sheet