FINA 4330 Corporate Finance
Ronald F. Singer Sample Midterm Exam Questions Fall, 20XX

Name____________________
SS# xxx-xx____________ (last 4 digits only)

You will be given a copy of the equations in the back of Ross, Westerfield and Jaffe, 8th edition.

- Cheating will not be tolerated. Don't even think about it!
- Show all work. If I cannot see how you got to an answer you will get no credit even if the answer is correct.
- Anything you want me to read must be on the exam paper.
- Carry all percentages (like returns) to two decimal places (*e.g.* 17.43%)
- Assume perfect capital markets with no taxes unless stated otherwise.
- You may not use a programmable calculator. Se me if you don't know if you can use your calculator!
- Explain all answers

1. The *Wall Street Journa*l dated October 3, 2006 reported the following Bond data for the end of trading on October 2:

Corporate Bond Quotes

Harra's Operating Company (HET)

Coupon:	6.500
Maturity	Oct 01, 2016
Last Price	89.25

(a) What is the yield to maturity of this bond?
(b) What is the market price (in dollars) for the Harra's Bond?
(c) What is the Current Yield of the Bond?
(d) How much will you be paid at the close of trading on October 1, 2016 if you held the bond to that date?

You get the following information regarding Harra's Stock from the *Wall Street Journal* on October 3, 20XX.

52 WEEKS High	Low	Stock (DIV)	Yld %	PE	Vol 100s	Close	Net Chg
83.33	57.29	HarrahEntn 1.60	2.1	42	122188	74.71	-0.97

(a) What was earning per share over the last year (12 MONTHS)?
(b) What was the closing price October 2, 20XX?
(c) If the required return to this stock is 12%, what is the market's forecast of the Net Present Value of Growth Opportunities per share?
(e) What is the firm's current plowback ratio?
(d) If you expect the firm's dividends to grow at a constant rate of 2% per annum, at the current retention rate, what is your estimate of the Return on New Investment?
(f) Do new investments have a positive or negative return? How do you know?

2. You are the CFO of Widget International, Inc. The most recent Income Statement is as follows:

Income Statement Widget International FY 2006
($ million)

Revenues	$15
Cost of Goods Sold	7
Selling, General and Administrative Expense (GS&A)	0.5
Depreciation	1
Interest	0.3
Dividends to preferred stockholders	0.2
EBIT	**$ 6.5**
Taxable Income	**6.2**
Tax	**2.17**
Net Income	**4.03**
Cash Flow from Operations	**5.33**
Cash flow Available to Common Stockholders	**4.83**

Assume that the firm's tax rate is 35% of taxable income and that there are no "balance sheet adjustments"

(a) Fill in the blanks above.

3. XYZ Corp. is expected to have Earnings Per Share (EPS) of $1.50 over the Current year (i.e. at t=1). The firm has a policy of paying out only 10% of its earnings to stockholders. There is no debt in the firm's capital structure. The Return on Investment (ROE) is 15%. If the required return to equity is 15%, determine:.
   (a) What is the firm's price per share? **$10**
   (b) What do you expect growth in dividends to be? **13.5%**
   (c) What do you expect growth in the price per share to be? **13.5%**

   The CFO, recommends that the firm change its payout ratio to 30% of Earnings, since at that level of investment the firm could earn 17% Return on Investment (ROE).

   (d) What happens to growth as a result of this change? **11.9%**
   (e) The Chairman of the Board says this is not a good idea since growth will decline. As a member of the Board, how would you show that this change in policy is a good idea. **New Value is: $14.52 (show work). Thus, even though growth has declined, the return on investment has increased. Therefore, IN THIS CASE, although less funds have been retained (and thus less growth), the reduced investment has lead to a reduced investment level but the investment is more productive. Thus, the price per share has increased.**

4. **Don't worry about this question** The *Wall Street Journa*l dated October 6, 20XX reported the following Bond data for the end of trading on October 6:

   Corporate Bond Quotes

   Harra's Operating Company (HET)

Coupon:	5.125
Maturity	Jun 01, 2017
Last Price	101.036

   (a) What is the yield to maturity of this bond? Not relevant
   (b) What is the market price (in dollars) for the Harra's Bond?
   (c) What is the Current Yield of the Bond?

(b) How much will you be paid at the close of trading on June 1, 2017 if you held the bond to that date?

5. As operations manager of the TOOBS Inc., you are considering building a Corporate Headquarters building located in Groene, TX. You expect that this will result in sales increasing by $300,000 per year, without any increase in cash expenses. The Building will cost $3,000,000, and will be depreciated (by the straight line method) over 20 years to its scheduled scrap value of $50,000. Total cash expenses are not expected to change. You expect to be able to sell the building for $175,000 after 20 years. The Corporate Tax Rate is 35%. The alternative is to remain in the existing building which has been totally depreciated and will be worth nothing in 20 years, but has a current market value of $200,000. The Opportunity Cost of Capital is 7%.

   (a) What is the NPV of this? Show all work
   Did this in class: NPV = $2,646,666-$3,000,000 = - $353,334
   (b) Would your answer change if you finance this with a mortgage at 5% interest per year that matured in 20 years? Explain
   We ignore all financing when we are considering an investment opportunity so the answer to 5(b) is the answer would not change. We deal with how to finance projects separately from the question of whether the project is desirable.

5. You get the following information regarding Applied Signal Technology Stock: from the Wall Street Journal

52 WEEKS High	Low	Stock (DIV)	Yld %	PE	Vol 100s	Close	Net Chg
9.10	3	AppldSignal(.25)	2.9	30	599	8.70	+.65

(a) What was earning per share over the last year (12 MONTHS)?
Price/EPS = PE so Price/PE = EPS thus 8.70/30 = .29 = EPS

(b) What was the closing price the day before?
   a. **Net Change = Today's close – Previous day's close**.
   Previous day's close = Today's Close - Net Change = $8.05

(c) If the required return to this stock is 12%, what is the market's forecast of the Net Present Value of Growth Opportunities per share? **$6.28**

(d) If you expect the firm's dividends to grow at a constant rate of 3% per annum, at the current retention rate, what is your estimate of the Return on New Investment? **21.75% (Accept 21.43 to 21.75)**

6. You invested in a new widget machine fifteen years ago at a cost $1,000,000. The machine is depreciating (for tax purposes) at $50,000 per year. Because of the increasing uncertainty involved in Widget markets, and your desire to retire, you are contemplating selling the machine in two years. You believe that you will be able to get $80,000 for the machine in real terms, and anticipate a 2% annual inflation rate over the next two years. The machine produces 20,000 widgets per year and the current cash expense is $15 per widget. The current price for widgets is $20 per widget. Historically, the average rate of return to firms producing widgets has been 18% per year. Find the Present Value of your ownership and eventual sale of the machine. Your tax rate is 34%.

   $209,061. Assumptions: The cash expenses and revenues increase at the inflation rate. Note: After tax cash flow does not increase at 2% per year. This is because depreciation is in nominal terms and does not vary with the inflation rate. See spreadsheet for solution.