Spring 2008 Name:

Quiz 2: Equity Instruments

Answer all questions and show necessary work. Please be brief. This is an open books, open notes exam.

1. Lodec Inc. is a small, publicly traded firm that is controlled and run by the Lodec family; they own the voting shares in the company and appoint all board members. Last year, the firm generated $ 18 million in after-tax operating income on capital invested of $ 300 million. The firm has a cost of capital of 10%.

   a. Assuming that the current return on capital and cost of capital continue into perpetuity and that earnings will grow 3% a year forever, estimate the value of the firm today. (2 points)

   b. Now assume that Lodic Inc. has $ 50 million in debt outstanding, a cash balance of $ 25 million and has a minority interest (recorded at book value) of $ 20 million on the balance sheet. (The firm has consolidated financial statements and owns 60% of a publicly traded subsidiary with a market value of equity of $ 100 million). Estimate the value of equity in Lodec Inc. (2 points)

2. You are valuing NuvoTel, a young, high growth technology company and have estimated the net income and cashflows to equity for the next 3 years. You also believe that the cost of equity (the firm is all equity funded), which is 20% today, will come down to 12% by the end of year 3.

Projected Cashflows (in Millions)

	1	2	3
Net Income	- 10	-5	+10
- Reinvestment	10	5	5
= FCFE	-20	-10	5
Cost of equity	20%	16%	12%

a. After year 3, you expect the firm to stay all equity funded with a cost of equity of 12% and anticipate the net income to grow 4% a year in perpetuity. If you believe that the firm cannot generate excess returns (i.e, will earn zero excess returns) in perpetuity, estimate the terminal value of equity. (2 points)

b. Given the expected cashflows and the terminal value of equity (from part a), estimate the value of equity today. (2 points)

c. Now assume that the firm has 10 million shares outstanding today, and has granted 2 million options to its top management; the exercise price of the options is $ 2/share. Furthermore, analysts are predicting that they will have to issue 8 million additional shares over the next 2 years (to cover their reinvestment needs). Using the treasury stock approach, estimate the value of equity per share today. (2 points)