Spring 2007 Name:

Quiz 2: Corporate Finance

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

1. Zane Natural, a beverage company, is considering expanding into the snack business and you have collected the following information on the investment:
   - The regression beta for Zane Natural is 1.15; the unlevered beta of firms in the snack business is 0.80.
   - The equity in Zane Natural has a book value of $ 500 million but the market value of equity is $ 2 billion.
   - The firm has $ 300 million (in both book and market value terms) in interest-bearing debt and lease commitments of $ 50 million every year for the next 5 years.
   - Zane Natural has an A rating and the default spread for A rated bonds is 1% over the riskfree rate.
   - The riskfree rate is 4% and the equity risk premium is 5%.
   - The effective tax is 30% and the marginal tax rate is 40%

a. Assuming that this project will be funded using the same mix of debt and equity as the company, estimate the cost of equity for the 'snack food" project. (2 points)

b. Estimate the cost of capital for this "snack food" project. (1 point)

2. You own a restaurant that generates $ 500,000 in after-tax operating income on revenues of $ 5 million. You are considering starting a service that will provide prepared meals to households and estimate that you will be able to generate annual revenues of $ 1 million from the service. You have come up with the following additional information:
   - You plan on using the existing kitchen space, but you will need to invest $500,000 in updating the facilities. This investment will be depreciated straight line over 5 years to a salvage value of $ 100,000.
   - You will need to hire additional kitchen staff to meet the demand. You expect your annual costs to be $200,000 for salary and related costs.
   - Your annual advertising costs will increase from $ 80,000 to $120,000, and your inventory, which is currently $ 100,000, will increase to $150,000 immediately.
   - You expect the cost of the food to be 50% of revenues and you plan to run the service for the next 5 years.
   - Your marginal tax rate is 40%.

   a. Estimate the annual after-tax cash flows (to the firm) from this investment. (3 points)

b. If your cost of capital is 15%, estimate the net present value of this investment. (2 points)

c. How would your answer change if you were told that 20% of the revenues from the "prepared food" service represent loyal customers who would have otherwise come to the restaurant to eat? (You can assume that they would have spent an equivalent amount at the restaurant and that the cost of the food is the same) (2 points)