Quiz 2: Corporate Finance

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

1. You are trying to estimate the cost of capital to use in assessing a new investment venture in the entertainment business, for Casco Inc, a publicly traded electronics company. You have been provided the following information:
   
   • The beta for Casco, based upon stock prices for the last 5 years, is 1.80 but the unlevered beta for entertainment companies is 1.20.
   • At the moment, Casco has one bank loan outstanding, with a principal payment due of $100 million at the end of 10 years and interest payments of $5 million every year for the next 10 years. Casco also has lease commitments of $12 million a year, due at the end of each year for the next 8 years.
   • Casco has 40 million shares outstanding, with a stock price of $10/share.
   • Casco has a bond rating of BB, with a default spread of 4.5% over the risk free rate. The marginal tax rate if 40% but Casco’s effective tax rate is 25%.
   • The riskfree rate is 3% and the equity risk premium is 6%.

   a. Estimate the market value of the interest bearing debt.  
   
   b. Estimate the debt value of lease commitments.
c. Estimate the cost of capital for this project, assuming that it will be funded using the same debt ratio that Casco uses to fund itself today. (2 points)
2. Nova Enterprises is considering changing its advertising policy from print advertising to social media advertising. To make this shift, Nova will have to incur an upfront cost of $10 million, primarily in technology infrastructure. This cost will be capitalized and depreciated straight line over 5 years to a salvage value of zero. As a result of the shift, Nova expects to be able to reduce what it spends on advertising for the next 5 years. If Nova’s cost of capital is 10% and its tax rate is 40%, how much would the annual pre-tax savings in advertising expenses have to be, each year for the next 5 years, for the shift to make sense? (3 points)
3. ESPN is considering opening a sporting complex in Bristol, Connecticut, offering sports programs and facilities for high school teams. You have the following information:
   a. ESPN is planning to use vacant land it already owns in its Bristol broadcasting facilities. If it does so, it has to cancel an alternate plan to lease this land to a neighboring business and generate $1 million a year in lease revenues for the very long term.
   b. The cost of building the sports complex is expected to be $50 million, depreciable straight line over 10 years to a salvage value of $10 million.
   c. The sporting facility is expected to generate revenues of $20 million a year.
   d. The direct operating expense associated with operating the facility is $8 million. ESPN will also allocate $6 million in SG&A costs to this facility, but $4 million of these costs are fixed costs.
   e. The cost of capital for ESPN is 10% but the cost of capital for companies that operate sports and entertainment complexes is 8%. The tax rate is 40%.

Assuming that ESPN plans to operate this sporting complex in perpetuity, with constant (no growth) cash flows, estimate the NPV of this investment. (3 points)