Spring 2025 Name:

Quiz 2: Corporate Finance

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

1. Columbia Pictures is a movie company, and it is considering entering the streaming business with content specifically directed for streaming services. You have collected information on companies that operate in the two businesses:

	Unlevered beta	*Debt to Equity*
Movie	0.90	20%
Streaming	1.20	10%

The company is planning on staying with its current debt to equity ratio of 20% for the streaming project and it expects its rating to remain unchanged at BB, with a default spread of 2.50%. If the riskfree rate is 4.5% the corporate tax rate is 25% and the equity risk premium for the company is 5%, estimate the cost of capital for the streaming project. (3 points).

2. Altona Telecom is a telecommunications company that is considering replacing its current call center employees with an AI system, and has collected the following information:
    a. The AI system will cost $50 million, and be depreciated to a salvage value of zero, using straight line depreciation over the next 5 years.
    b. Using the system is expected to reduce the company's annual payroll from $51 million to $36 million, for the next 5 years.

    If the corporate tax rate is 25%, estimate the **annual incremental after-tax cashflow** on the project. (Just do it for one year, since it should be the same every year) (2 points)

3. Corona Software is a business software company that is considering adding a business consulting arm. The consulting business will not need any additional staffing and is expected to have **an after-tax operating margin of 60%**, but it will require the company to upgrade its data centers **for $120 million today, three years earlier than was planned**. If the cost of the upgrade in three years would have also been $120 million, estimate **how much revenue Corona will need to generate on the consulting business, on an annual basis** for the next five years, to break even on this investment. (Cost of capital is 9% and tax rate, if needed, is 25%) (2 points)

4. Serrano Foods is a food processing company, and it is considering making an investment in a new factory that **will cost $90 million and be depreciated straight line over the project life of three years to a salvage value of zero**. The company **plans to borrow $60 million** which it expects to **pay back in three equal installments of $20 million** over the next three years. If the **net income** from the factory is expected to be **$5 million a year** for the next three years, estimate the net present value of the investment. (The cost of equity is 12%, and the tax rate, if you need one, is 25%.) (3 points)