Spring 2024 Name:

Quiz 2: Corporate Finance

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

1.You have been asked to estimate the cost of capital for Krystal Kandy, a publicly traded candy company and have been given the following information on its financing mix:

	Book Value ($ millions)	*Market Value ($ millions)*	*Risk details*
Debt	$250.00	$200.00	Bond rating = BBB; Default spread = 2%
Equity	$250.00	$1,000.00	Unlevered beta = 0.80: ERP = 4.5%

If the riskfree rate is 4% and the marginal tax rate for the company is 25%, **estimate the cost of capital** for the company. (2 points)

2.You own and operate a hair dressing salon and are considering adding hair blowout services, to augment revenues and earnings, with the following estimates each year, for the next three years, for what it will do to you total revenues:

	Without hair styling	With hair styling
Annual Revenues	$135,000	$175,000
Annual Expenses	$60,000	$75,000
Annual EBITDA	$75,000	$100,000

You have to spend $45,000 up front to add the hair blowout service, with that investment being depreciated over the next 3 years to a salvage value of zero. If the tax rate is 30% and the cost of capital is 10%, **estimate the NPV for the investment**. (3 points)

3. You are an AI consultant and are considering two jobs, with the following information:
   - **Government job**: You will be hired on a five-year contract, by the US government, where you are guaranteed payments of $3 million a year for the next three years, and $4 million each year in years 4 & 5.
   - **Private AI consultant**: You will invest $5 million right now, to set up the consultancy and expect to earn $6 million each year for the next three years.

   If the riskfree rate is 4% and the cost of capital for AI consulting is 9%, **which is the better option**? (You can assume that both choices are replicable – you can repeat them, when they expire, on the same terms). (You can ignore taxes) (3 points)

4. You are reviewing the net present value calculation done by an analyst, on an investment project, and notice that he expensed the $20 million immediately, for tax purposes, instead of depreciating that amount straight line over four years. **What effect will make this change have on the net present value**, if the marginal tax rate is 25% and the cost of capital is 8%? (2 points)