Spring 2016 Name:

Final Exam: Corporate Finance

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

1. Regal Inc. is a publicly traded company that operates in the travel and entertainment business. You have collected the following information on its business breakdown (with dollar values in millions)

	Revenues	EV/Sales ratio	Unlevered Beta
Travel	$ 1,000	1.0	0.9
Entertainment	$500	2.0	1.2

Regal has 80 million shares trading at $15/share and $600 million in 10-year corporate bonds (with a coupon rate of 4%) outstanding, trading at par. The company also has lease commitments of $50 million a year for the next 5 years and a marginal tax rate of 40%.

a. Estimate the current debt to equity ratio (in market value terms) for Regal. (1 point)

b. Estimate the levered beta for Regal Inc. (2 points)

c. Now assume that Regal plans <u>to sell its travel business</u> and expects to <u>receive fair value</u> from the divestiture. It plans invest half the proceeds in a social media (online advertising) business and use the rest to buy back stock. If the unlevered beta of social media (online advertising) is 1.50, estimate the levered beta after this transaction. (3 points)

2. Universal Studios is planning a major expansion into Latin America and has enlisted you in assessing whether it makes sense. You have been given the following information:
    - The expansion will require investment in a new studio and broadcasting facilities in Sao Paulo, which will cost $1 billion (to be spent immediately), depreciable over 10 years to a salvage value of $200 million.
    - Without the expansion, Universal expects to generate $400 million in annual revenues from Latin America each year for the next 10 years, and the <u>expansion will triple those annual revenues</u>. Universal expects to continue to generate an EBITDA margin of 40% on the incremental revenues. (This EBITDA margin is before allocating G&A expenses to the project)
    - Universal will allocate $90 million in G&A costs to the Latin American operations, but <u>$60 million of these costs are fixed</u>.
    - The project is expected to last ten years, but to keep the studio technologically updated, Universal will have to reinvest 20% of its depreciation back into the project every year as maintenance capital expenditures.
    - You can assume that Universal is all-equity funded and that it faces an effective tax rate of 40% no matter where it operates.

    a. Estimate the expected incremental cash flows for the investment over its 10-year life. (3 points)

b. The cost of equity that Universal (correctly) used for its most recent studio investment (which was entirely in the US) was 7.4%. (The US Treasury bond rate is 2%, the US equity risk premium is 6% and the additional country risk premium for Latin America is 3%). Estimate the NPV of the Latin American expansion. (3 points)

3. Gabana Inc. is a publicly traded company that is considering a restructuring plan. The company currently has 100 million shares trading at $20/share and total debt outstanding of $500 million. The firm currently has a (levered) beta of 1.15, the risk free rate is 2%, the equity risk premium is 6% and the marginal tax rate is 40%.
    a. The firm is planning **to triple its dollar debt** and use the proceeds from the new debt to pay dividends & buy back stock. If it's bond rating will drop to BBB with a default spread of 3% over the risk free rate, estimate the cost of capital after the recapitalization. (2 points)

b. You estimate that if the firm triples its debt, its value as a business will increase by 5%. Estimate the cost of capital that the firm currently faces (before recapitalization), if the firm is mature with no growth expected in perpetuity. (2 points)

c. Now assume that the firm plans to use half of the proceeds to pay a special dividend to its stockholders and then using the other half to buy back stock at $16.67/share. Estimate the value per share of the remaining shares after the recapitalization. (2 points)

4. You have been asked to assess the dividend policy of Glide Inc., a consumer product company and have been given the last two years of data on the company.

	2014	*2015*
Revenues	\$2,000	\$2,500
EBITDA	\$800	\$1,000
EBIT	\$600	\$750
Net Income	\$300	\$425
Total Working Capital (including cash)	\$100	\$125
Cash (invested in T.Bills)	\$60	\$100
Total Debt	\$150	\$200

The company also had capital expenditures of \$300 million in 2015 and made a cash acquisition of \$100 million in 2015.

a. If Glid <u>bought back \$200 million of its own stock in 2015</u>, estimate the <u>dividend payout ratio for Gide in 2015</u>. (Dividend payout = Dividends as a percent of net income). (3 points)

b. Now assume that you are told that net income and revenues are expected to grow 20% in 2016, while capital expenditures and depreciation will grow 10%. In addition, the company plans to make no cash acquisitions in 2016, to maintain non-cash working capital at the same percent of revenues as it did in 2015 and to pay out 25% of its net income as dividends. Estimate how much the company can spend on stock buybacks in 2016, if it also wants to increase its cash balance by $50 million during the year and retire half of its total debt. (3 points)

5. Carbon Springs is a beverage company that reported the following numbers for the most recent fiscal year (in millions of US dollars);

	Most recent year
Revenues	$2,000.00
EBITDA	$500.00
DA	$100.00
EBIT	$400.00
- Interest expenses	$50.00
Taxable Income	$350.00
Taxes	$105.00
Net Income	$245.00

At the start of the year, Carbon Springs reported a book value of equity of $700 million, a book value of debt of $1 billion and a cash balance of $300 million. You can assume that the company will continue to generate its current return on invested capital in perpetuity and that its effective tax rate is the marginal tax rate.

a. Assuming that operating income will grow at 10% a year for the next five years, estimate the free cash flows to the firm for the next five years. (2 points)

b. At the end of year 5, the company is expected to become a mature business, growing at 2% a year in perpetuity with a cost of capital of 8% (mature company levels). Estimate the value of the business at the end of year 5. (2 points)

c. Assume that the company's current cost of capital is 12% and is expected to stay at that level for the next 5 years, estimate the value of equity per share today. (You can assume that the debt of $1 billion and cash balance of $300 million are also current values and that the company has 150 million shares outstanding.) (2 points)