***No credit will be provided for work not shown – correct or not!***

1. PAP Inc.’s financial statements are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **PAP Inc.**  **Balance sheet**  **For the Period ended 2016 and 2017**  **($000)** | | | |
| **ASSETS** | | | |
|  | **2016** | **2017** |
| Cash | $ 200 | $ 150 |
| Accounts receivable | 450 | 425 |
| Inventory | 550 | 625 |
| *CURRENT ASSETS* | $ 1,200 | $ 1,200 |
| Plant & equipment | $2,200 | $2,600 |
| Less Accumulated Depreciation | (1,000) | (1,200) |
| Net Plant & equipment | $1,200 | $1,400 |
| Total Assets | $2,400 | $2,600 |
| **LIABILITIES & Owner’s Equity** | | | |
| Accounts payable | $ 200 | $150 |
| Notes Payable current (9%) | 0 | 150 |
| *CURRENT LIABILITIES* | $ 200 | $300 |
| Bonds | $ 600 | $600 |
| **Owner’s Equity** | | |
| Common stock | $900 | $900 |
| Retained earnings | 700 | 800 |
| Total Owner’s Equity | $ 1,600 | $1,700 |
| Total liabilities & Equity | $2,400 | $2,600 |

|  |  |  |
| --- | --- | --- |
| **PAP Inc. Income Statements**  **(000’s)** | | |
|  | **2016** | **2017** |
| Sales | $1,200 | $1,450 |
| COGS | 700 | 850 |
| Gross Profit | $500 | $600 |
| Selling, general, ADM Expenses | 30 | 40 |
| Depreciation | 220 | 200 |
| Operating Income | $ 250 | $ 360 |
| Interest expense | 50 | 64 |
| EBT | $200 | $ 296 |
| Taxes (40 %) | 80 | 118 |
| Net income | $120 | $178 |

**(10 pts**) Using the financial statements above, Calculate PAP Inc.’s free cash flows from operation for year ending in 2017?

1. **(10 pts)** Renfro Rentals has issued bonds that have a 5% coupon rate, payable semi-annually. The bonds mature in 8 years, have a face value of $1,000, and a yield to maturity of 8.5%. What is the price of the bonds?
2. Berdwen, Inc. is analyzing the merits of a potential project. There is great volatility in the marketplace which will impact the project with risky free cash flows. Berdwen, Inc. has a weighted average cost of capital of 12.2%, and forecasts the free cash flows below:

|  |  |
| --- | --- |
| Year | Expected FCF |
| 0 | -$10,000 |
| 1 | $16,241 |
| 2 | -$5,540 |

**(10 pts)** Use an appropriate capital budgeting technique to determine if the project should be accepted? Why or why not?

1. **(10 pts)** Weisman Electronics just paid a $1.00 dividend, the market yield is 10%, the risk-free rate is 4%, and Weisman’s Beta is 2.5. How fast do investors expect the company to grow in the future if its stock is selling for $15.75?
2. **(10 pts)** Larry, Inc. has three components of capital: preferred stock, common stock, and corporate bonds with a target capital mix of 10%, 45%, and 45%, respectively. It faces an after-tax cost of debt of 3.2%; 6% cost of preferred stock, and 12% cost of common stock. If Larry, Inc is in the 21% marginal tax rate, what is its weighted average cost of capital?
3. **(10 pts)** Tysseland Company’s present market value capital structure shown below is optimal. There is no short-term debt:

|  |  |
| --- | --- |
| Capital Component | Market value |
| Debt | 30,000,000 |
| Common equity | 90,000,000 |

Bonds have an 8% coupon rate, and they will be sold at par. Common stock is currently selling at $30 a share. The stockholder’s required rate of return is estimated to be 12%, consisting of a dividend yield of 4% and an expected growth rate of 8%. (The next expected dividend is $1.20, so the dividend yield is $1.20/$30 = 4%.) The marginal tax rate is 30%. What is Tysseland’s WACC?

1. **(10 pts)** A project has an initial cost of $40,000, expected net cash flows of $9,000 per year for 7 years, and a cost of capital of 11%.
   1. What is the project’s NPV?
   2. What is the project’s IRR?
   3. What is the project’s MIRR?
   4. Should the project be accepted? Explain.
2. **(10 pts)** A 30-year bond matures in 7 years sells for $950, pays interest semiannually, and has a yield to maturity of 10.5883%. What is the bond’s current yield?
3. **(10 pts)** Two mutually exclusive projects, Alpha and Beta have free cash flows listed below with unequal lives. The firm has a cost of capital of 15%. Use the replacement chain method to determine which of the two projects should be selected:

|  |  |  |
| --- | --- | --- |
|  | **Alpha** | **Beta** |
| Year 0 | ($18,543) | ($45,664) |
| Year 1 | $5,000 | $20,000 |
| Year 2 | $5,000 | $20,000 |
| Year 3 | $5,000 | $20,000 |
| Year 4 | $5,000 |  |
| Year 5 | $5,000 |  |
| Year 6 | $5,000 |  |

1. **(10 pts)** Using the table below, what is the maximum that an investor should be willing to pay for the share of common stock today?

**Table below to be used with problem #6:**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Value** | **Explanation** |
| Dividend growth estimate | 5%, 0% | 5% for next 2 years (annual estimate) and 0% per year indefinitely thereafter. |
| Current dividend | $1.00 | Paid to shareholders on record as of 4/28/21 |
| Beta coefficient | 2.0 | Expected future estimate of beta |
| Expected market return | 12.0% | Expected (annual) return on the S&P 500 Index |
| RFR | 5.0% | Expected 10-year Treasury bond yield |