**Final Exam Questions**

AAA Systems is expected to pay a $000 dividend at year end (D1 = $000), the dividend is expected to grow at a constant rate of 000% a year, and the common stock currently sells for $000 a share. The before-tax cost of debt is 000%, and the tax rate is 000%. The target capital structure consists of 000% debt and 000% common equity. What is the company’s WACC if all equity is from retained earnings?

BBB Systems is expected to pay a $0.00 dividend at year end (D1 = $0.00), the dividend is expected to grow at a constant rate of 00% a year, and the common stock currently sells for $00 a share. The before-tax cost of debt is 000%, and the tax rate is 000%. The target capital structure consists of 00% debt and 00% common equity. What is the company’s WACC if all equity is from retained earnings?

CCC Systems is expected to pay a $000 dividend at year end (D1 = $000), the dividend is expected to grow at a constant rate of 000% a year, and the common stock currently sells for $000 a share. The before-tax cost of debt is 000%, and the tax rate is 00%. The target capital structure consists of 00% debt and 00% common equity. What is the company’s WACC if all equity is from retained earnings?

DDD Systems is expected to pay a $000 dividend at year end (D1 = $0000), the dividend is expected to grow at a constant rate of 000% a year, and the common stock currently sells for $00 a share. The before-tax cost of debt is 00%, and the tax rate is 40%. The target capital structure consists of 00% debt and 00% common equity. What is the company’s WACC if all equity is from retained earnings?

EEE Systems is expected to pay a $000 dividend at year end (D1 = $000), the dividend is expected to grow at a constant rate of 000% a year, and the common stock currently sells for $00 a share. The before-tax cost of debt is 0%, and the tax rate is 00%. The target capital structure consists of 00% debt and 00% common equity. What is the company’s WACC if all equity is from retained earnings?

FFF Systems is expected to pay a $000 dividend at year end (D1 = $000), the dividend is expected to grow at a constant rate of 0% a year, and the common stock currently sells for $00 a share. The before-tax cost of debt is 00%, and the tax rate is 00%. The target capital structure consists of 00% debt and 00% common equity. What is the company’s WACC if all equity is from retained earnings?

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $00,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $0,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $0,000 investment is projected in year 2.  DDK’s cost of capital is 00% and the project does not have a distinct risk profile. DDK’s tax rate is 00%.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (00% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -000,000 |  -  |  (0,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (00% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -0,000 |  -  |  (0,000) |  -  |
| WCR |  |  (,000) |  (,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (00% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -00,000 |  -  |  (0,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $00,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $0,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $15,000 investment is projected in year 2.  DDK’s cost of capital is 00% and the project does not have a distinct risk profile. DDK’s tax rate is 00%.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (50% of Sales) |  |  (00,000) |  00,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -00,000 |  -  |  (00,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $0,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $15,000 investment is projected in year 2.  DDK’s cost of capital is 00% and the project does not have a distinct risk profile. DDK’s tax rate is 00%.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  000,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (50% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -0,000 |  -  |  (0,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $0,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $0,000 investment is projected in year 2.  DDK’s cost of capital is 00% and the project does not have a distinct risk profile. DDK’s tax rate is %.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  0,000  |  00,000  |
| - Cost of Goods Sold (50% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -0,000 |  -  |  (0,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 50,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $0,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $0,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $20,000 investment is projected in year 2.  DDK’s cost of capital is 12% and the project does not have a distinct risk profile. DDK’s tax rate is 00%.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  00,000  |  00,000  |
| - Cost of Goods Sold (50% of Sales) |  |  (0,000) |  0,000  |  0,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -0,000 |  -  |  (0,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 0,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

DDK Industries is considering a new capital budgeting project that will last for three years. The initial investment outlay for project equipment is expected to be $00,000. The equipment will be straight-line depreciated down to zero book value over the three year period. The expected market value of the project assets is forecasted to be $0,000 when the project is liquidated at the end of the third year.  The project will require $0,000 Net Working Capital investments in years 1 and 2. The project does not require any investment in fixed assets during years 1 and 3, but a $00,000 investment is projected in year 2.  DDK’s cost of capital is 00% and the project does not have a distinct risk profile. DDK’s tax rate is 00%.  Based on extensive research, analysts have prepared the following incremental revenues and before tax costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** |
| Sales (Revenues) |  |  00,000  |  000,000  |  000,000  |
| - Cost of Goods Sold (50% of Sales) |  |  (0,000) |  00,000  |  00,000  |
| Depreciation |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| EBIT |  |  (XX,XXX)  |  (XX,XXX)  |  (XX,XXX)  |
| Capital Expenditures | -00,000 |  -  |  (00,000) |  -  |
| WCR |  |  (0,000) |  (0,000) |  |

Note: Additional fixed capital investments are depreciated straight line over a three-year period; the first depreciation expense is deducted at the end of the year following the investment. The 00,000 liquidation value reflects enhancements realized through capital investments in fixed assets. Should DDK implement this project? Please use NPV and IRR decision rules and explain your decision.

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 5 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 0.00 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is 00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 5 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 0.00 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 00 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 0.00 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is 00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 5 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 0.00 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is 00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 5 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 000 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is 00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC Inc. is evaluating a new project with a distinct risk profile that is different than its current line of business. The ABC intends to fund the project with 00% debt and 00% equity.  In an effort to determine the appropriate required return on its project ABC identifies 5 comparable companies with the following “equity betas” and “debt/equity” ratios.  While the comparable companies have varying marginal tax rates ABC’s marginal tax rate is 00%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Equity Beta** | **D/E Ratio** | **Marginal Tax Rate** |
| A | 000 | 0.00 | 00% |
| B | 000 | 0.00 | 00% |
| C | 000 | 0.00 | 00% |
| D | 000 | 0.00 | 00% |
| E | 000 | 0.00 | 00% |

Suppose credit spread for this project is 00%, risk free rate is 00% and EMRP is 00%. Based on the information given, estimate the following:

1. Asset and Equity Betas of the Project
2. Cost of Debt and Cost of Equity of the Project
3. Required Rate of Return on the Project

ABC has been considering two mutually exclusive projects with the following NPVs and project lives.

|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  0000  | 3 years |
| B |  0,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

ABC has been considering two mutually exclusive projects with the following NPVs and project lives.

|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  0,000  | 3 years |
| B |  0,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

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|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  00,000  | 3 years |
| B |  00,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

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|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  0,000  | 3 years |
| B |  0,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

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|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  0,000  | 3 years |
| B |  0,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

ABC has been considering two mutually exclusive projects with the following NPVs and project lives.

|  |  |  |
| --- | --- | --- |
| **Project** | **NPV** | **Economic Life** |
| A |  0,000  | 3 years |
| B |  0,000  | 5 years |

ABC’s cost of capital is 00%. Assuming that projects can be repeated with the same cash flow and risk profiles what would be the respective Net Perpetual (Terminal) Values of projects A and B (round to the next integer)? What should be the decision?

Briefly describe your term paper topic and three main conclusions you draw from your research.