1. The way of financing by leasing, where the lessor purchases the property from the prospective lessee and rents it back to the lessee, is called:
2. The way of financing by leasing, where the lessor buys the property from the manufacturer and leases it to the lessee
3. According to the Income Tax Act, assets that are recorded in the accounting as intangible assets (as defined by a special legal regulation) are depreciated if their entry price is higher than:
4. The expected change in return on investment (security, assets, etc.) in relation to the unit change in return on the market portfolio is shown by an indicator:
5. If interests represented a tax-deductible expense and there were no financial crunch costs, then, according to the Miller and Modigliani (MM II) theory, the average cost of the capital:
6. A bill of exchange payable for a certain amount of time after the submission is called: a time sight draft
7. A bill of exchange payable upon submission is called: a sight draft
8. A bill payable on a given day indicated in the bill of exchange is called: a fixed bill of exchange
9. The first owner of a security (bill of exchange) is called: a remitter
10. A person who should pay the foreign bill of exchange is called: a drawee of a bill

**Problem 1 (15 points)**

Sirius Cybernetics Corporation currently operates 4 product processing machines. The existing machines were purchased two years ago.

Acquisition price = CZK 750,000

Operating costs per year (excluding depreciation) = CZK 95,000

Life time = 6 years

Due to the planned **extension** of production the company intends to implement one of the following three projects (A, B, C). The required rate of return is 15%. :

Alfa project

Acquisition price = CZK 55,000

Operating costs per year (excluding depreciation) = CZK 7,000

Life time = 4 years

Beta project.

Acquisition price = CZK 70,000

Operating costs per year (excluding depreciation) = CZK 13,000

Life time = 8 years

Gama project.

Acquisition price = CZK 140,000

Operating costs per year (excluding depreciation) = CZK 4,000

Life time = 16 years

Required rate of return is 15%.

**Sort these technology variants according to their effectiveness, from the cheapest to the most expensive. (5 points)**

**Calculate whether it would also be beneficial (in addition to the expansion of production) to replace the existing machines with one of the planned projects. Give reasons for your decision. (5 points)**

In connection with Problem 1, consider another project.

Omega project

Acquisition price = CZK 90,000

Operating costs per year (excluding depreciation) = CZK ?

Life time = 11 years

**Calculate which amount of operating costs (excluding depreciation) is acceptable to make the project more profitable than the best of the projects in Problem 1. (5 points)**

**Problem 2 (25 points)**

Parker Industries is considering implementing the following project

The project development is planned for two years. Investment expenses will always be spent at the end of the year, amounting to:

* Year 1 = CZK 2,000k
* Year 2 = CZK 2,000k

At the end of the second year of development, stocks will grow by CZK 0.2 million, receivables by CZK 0.7 million and liabilities by CZK 0.1 million.

The investment life time is 8 years. Consider linear depreciation.

An annual production of 4,000 pieces is expected. The piece price for the product is CZK 500.

Unit costs of material and energy consumption amount to CZK 95 per product (variable cost).

Annual wages amount to CZK 210,000 per project.

At the end of the life time the equipment will be sold for CZK 0.5 million and the capitalization of NWK

The project is funded 70% by credit. However, the structure of the company's long-term resources is different. The company’s long-term capital requirements are funded 55% internally and 45% by foreign capital.

 The required return on equity is 15%

The interest rate on debt is 8%.

Income tax rates account for 20%.

* **Calculate the Net Present Value (5 points)**
* **Calculate the Internal Rate of Return of the project. (5 points)**
* **Calculate the modified IRR (internal rate of return). (5 points)**
* **How will the NPV of the project change if you consider an average 2% inflation during the course of your investment (i.e. from year 3). (5 points)**
* **What is the project sensitivity rate to the change in production volume? (5 points)**

**Problem 3 (10 points)**

# Oceanic Airlines considers introducing a new airline.

# Capital expenditure amounts to CZK 815 million.

# Revenue from the project is considered by the company in the following variants.

|  |  |  |
| --- | --- | --- |
| Demand  | Capital income  | Probability |
| High | 480 | 0.3 |
| Middle  | 380 | 0.6 |
| Low  | 220 | 0.1 |

# The company expects to operate the air line for 4 years.

# The amount of demand in individual years is independent of the previous period.

* **Calculate the expected annual income. (5 points)**
* **Evaluate the return and project risk (by direct risk projection) over its lifetime. Consider risk-free return in the amount of 3% (5 points)**