Finance – Test Exam I.

1. You are planning to buy a flat that cost €140.000, your parents give you €40.000. The term of your home loan is 10 years and the lending rate is 5%, the frequency of payment is quarterly. How much will be your installment, if you want to pay the installments at the beginning of the quarters? How much interest will you pay for the bank during the loan? (4 points)

(3 152,73 EUR quarterly)

(26 109,29 EUR)

2. Let's assume that on January 25th, we put a 900,000 HUF deposit into an account that compounding the interest on the last day of each calendar quarter. We would like to withdraw our money - the principal amount increased by the interest - on the 9th of December of the same year. How much money can we have at that time if the financial institution fixed a nominal 1.5% annual interest rate within the terms of the deposit? Use the German-way of iterest calculation! (4 points)
(911 832,4796 HUF)

3. Your monthly saving is 20.000 USD. The term of saving is 8 years. What is the future value of this saving scheme at the time of the last savings installment, if the deposit rate is 3.5%? (4 points)

(2 212 050,4625 USD)

4. Let's suppose you won € 90 million in the Eurojackpot on Saturday. How much can you spend each year if your total winnings are to be given on your grandchildren, the long-term annual interest rate is 4%, the interest is compounded yearly? And how much if you want to spend the full amount in 50 years and you want equal amount of money in each year? (4 points)

(3 600 000 EUR)

(4 189 518,04 EUR)

5. You are considering an investment that costs €2,000. Its cash flows are in table below:

Year 1   Year 2   Year 3

€600   €1000   €800

The expected rate of return is 10%. What is the GPV and NPV of the project? Is it worth investing in this project? (4 points)

(GPV   1972,95 EUR)

(NPV   -27,05 EUR)

(No)

Total points: 20