



Gestão Financeira II / Corporate Finance II

Undergraduate Programs

Mid-Term Test

April 22nd, 2012

15:30-16:30 (+15 MIN tolerance)

IMPORTANT INFORMATION TO READ BEFORE SOLVING THE TEST:

1. The test has 8 questions of multiple choice (each correct answer scores 2 marks, no answer awards you 0, and an incorrect answer penalizes 0.25 marks) and 1 question (worth 4 points) in which you must present all steps of your solution.
2. You must **answer the multiple choice questions (1 to 8) in the grid presented below in this page.**
3. Fill in your name and student number.
4. You can use pens, pencils and a calculator. Nothing else. A set of formulae is provided together with the questions.
5. You cannot un-staple your test.

Name: _____ No. _____

| Question | A | B | C | D |
|----------|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |

Good luck!



1. Consider the following two quotes for XYZ stock:

| April 19th | Apri 22nd |
|------------|------------|
| Ask: 15.25 | Ask: 16.00 |
| Bid: 15.20 | Bid: 15.93 |

The amount you would have to pay to purchase 150 shares of XYZ stock on April 19th is closest to:

- A) \$2280
 - B) \$2290
 - C) \$2390
 - D) \$2400
2. Consider the following prices from a McDonald's Restaurant:

| | |
|------------------|--------|
| Big Mac Sandwich | \$2.99 |
| Large Coke | \$1.39 |
| Large Fry | \$1.09 |

A McDonald's Big Mac value meal consists of a Big Mac Sandwich, Large Coke, and a Large Fry. Assume that there is a competitive market for McDonald's food items and that McDonalds sells the Big Mac value meal for \$4.79. Does an arbitrage opportunity exist and if so how would you exploit it and how much would you make on one extra value meal?

- A) Yes, buy extra value meal and then sell Big Mac, Coke, and Fries to make arbitrage profit of \$0.68
 - B) No, no arbitrage opportunity exists
 - C) Yes, buy Big Mac, Coke, and Fries then sell value meal to make arbitrage profit of \$1.09
 - D) Yes, buy Big Mac, Coke, and Fries then sell value meal to make arbitrage profit of \$0.68
3. Hugh Akston took out a 30-year mortgage with an EAR of 5.9%. If Hugh borrowed \$300,000 to buy his home, then his monthly payment will be closest to:
- A) \$835
 - B) \$1,750
 - C) \$1,780
 - D) \$10,240



4. The value of currently unused warehouse space that will be used as part of a new capital budgeting project is

- A) an opportunity cost.
- B) irrelevant to the investment decision.
- C) an overhead expense.
- D) a sunk cost.

5. Consider the following four bonds that pay annual coupons:

| Bond | Years to maturity | Coupon | YTM |
|------|-------------------|--------|-----|
| A | 1 | 0% | 5% |
| B | 5 | 6% | 7% |
| C | 10 | 10% | 9% |
| D | 20 | 0% | 8% |

The percentage change in the price of the bond "C" if its yield to maturity increases from 9% to 10% is closest to:

- A) -17%
- B) -6%
- C) -4%
- D) 4%

6. Nielson Motors has a share price of \$25 today. If Nielson Motors is expected to pay a dividend of \$0.75 this year, and its stock price is expected to grow to \$26.75 at the end of the year, then Nielson's dividend yield and equity cost of capital are:

- A) 3.0% and 7.0% respectively
- B) 3.0% and 10.0% respectively
- C) 4.0% and 6.0% respectively
- D) 4.0% and 10.0% respectively



7. Consider the following average annual returns:

| Investment | Average Return |
|-------------------|-----------------------|
| Small Stocks | 23.2% |
| S&P 500 | 13.2% |
| Corporate Bonds | 7.5% |
| Treasury Bonds | 6.2% |
| Treasury Bills | 4.8% |

The excess return for the portfolio of small stocks is closest to:

- A) 10.0%
- B) 15.7%
- C) 18.4%
- D) 17.0%

8. Consider the following expected returns, volatilities, and correlations:

| Stock | Expected Return | Standard Deviation | Correlation with Microsoft | Correlation with Wal-Mart |
|--------------|------------------------|---------------------------|-----------------------------------|----------------------------------|
| Microsoft | 44% | 24% | 1.0 | 0.7 |
| Wal-Mart | 23% | 14% | 0.7 | 1.0 |

The volatility of a portfolio that consists of a long position of \$12000 in Wal-Mart and a short position of \$2000 in Microsoft is closest to:

- A) 9%
- B) 14%
- C) 11%
- D) 12%



9. (4 points) Consider a new 2-year project presented by the pop music famous group THE SMELLY CAT Corporation:

| Year | 1 | 2 |
|----------|-----|-----|
| Revenues | 210 | 140 |
| EBITDA | 90 | 60 |

The project involves introducing a new album and tour. In this industry, Net working capital is 8% of next year's revenues. Capital expenditures to be made today are 140, in technical equipment with a life of 2 years (straight-line depreciation). At the end of the project this equipment will be sold for 30.

If this project goes ahead, THE SMELLY CAT Corporation expects to boost annual sales of its older albums by 25. Investors require an annual return of 15%. The corporate tax rate is 30%.

- (1.5 points) Compute the free cash flows of the project. What is the discounted payback period? Explain.
- (1 point) Should you invest in the project? Explain.
- (1.5 points) Read the following statement: "The IRR of this project is lower than the cost of capital of 15%, which makes the project attractive". Do you agree with this statement? Explain.



EXTRA SPACE TO COMPLETE QUESTION 9



SCRAP PAPER



SCRAP PAPER