



a 1911

GESTÃO FINANCEIRA II

Lic. - Undergraduate Degree

QUIZ (04.12.2017)

Name: Number:

Answer each question by drawing a circle around the letter that, in your opinion, corresponds to the correct solution.

1- Free cash flow (FCF) and net income (NI) differ in the following ways:

- I) Net income accrues to shareholders, calculated after interest expense; free cash flow is calculated before interest and before COGS.
- II) Net income is calculated after various noncash expenses, including depreciation; FCF adds back depreciation.
- III) Capital expenditures and investments in working capital do not appear in net income calculations; they do reduce free cash flows.
- IV) Net income is never negative; free cash flows can be negative for rapidly growing firms, even if the firm is profitable, because investments can exceed cash flows from operations.

- a) I and II only
- b) II and III only
- c) I, II and III only
- d) IV only

2- Consider a company with the following annual FCF:

FCF1 = \$20 million;

FCF2 = \$20 million;

FCF3 = \$20 million.

Assume that free cash flow grows at a rate of 5% for year 4 and beyond.

If the weighted average cost of capital is 10%, calculate the value of the firm.

- a) \$350.263
- b) \$469.737
- c) \$207.513
- d) \$365.289



3- Consider the following data for CDA Company:

| Year | 1 | 2 | 3 | 4 |
|----------------|----------|----------|----------|----------|
| FCF (M) | \$1 | \$2 | \$3 | \$3.06 |

After year 3, a constant growth rate of 2% is sustained forever. The weighted average cost of capital is 10%.

What is the value of the firm?

- a) \$33.554
- b) \$31.300
- c) \$43.066
- d) \$30.941

4- From a geometric viewpoint, how is the position diagram for a call option related to the diagram of a put option on the same stock having the same exercise price and maturity?

- a) Exactly the same as the put diagram for the given exercise price
- b) The mirror image of the put diagram, reflected around the exercise price
- c) The inverse of the put diagram
- d) Unrelated to the put diagram no matter what the exercise price

5- Buying a call option, investing the present value of the exercise price in T-bills, and short-selling the underlying share is the same as:

- a) buying a put and a share
- b) buying a call and a put
- c) selling a call
- d) buying a put

6- If the stock makes a dividend payment before the expiration date, then the put-call parity relation is:

- a) Value of call = value of put + share price - present value (PV) of dividend - PV of exercise price
- b) Value of call = value of put + share price + PV of dividend + PV of exercise price
- c) Value of call = value of put - share price + PV of dividend - PV of exercise price
- d) Value of call = value of put + share price + PV of dividend - PV of exercise price



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- III) Net income is calculated after various noncash expenses, including depreciation; FCF adds back depreciation.
- IV) Net income accrues to shareholders, calculated after interest expense; free cash flow is calculated before interest.

- a) I and II only
- b) I, III and IV only
- c) I, II and III only
- d) All the above

2- Consider the following data:

FCF1 = \$30 million; FCF2 = \$30 million; FCF3 = \$30 million. Assume that free cash flow grows at a rate of 5% for year 4 and beyond. If the weighted average cost of capital is 12%, calculate the value of the firm.

- a) \$371.003
- b) \$522.055
- c) \$392.356
- d) \$258.897



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3- Consider the following data for WYZ Company:

| Year | 1 | 2 | 3 | 4 |
|---------|-----|-----|-----|--------|
| FCF (M) | \$2 | \$5 | \$8 | \$8.16 |

Considering a constant growth rate of 2% is sustained forever after year 3 and a weighted average cost of capital 12%, calculate the value of the firm.

- a) \$63.853
- b) \$93.066
- c) \$63324
- d) \$69.547

4- From a geometric viewpoint, a call diagram normally has:

- a) Positive values in the upper nodes
- b) Zero values in the upper nodes
- c) Positive values in the lower nodes
- d) None of the above

5- Buying a put option, selling the present value of the exercise price in T-bills, and buying the underlying share is the same as:

- a) Buying a call and a put
- b) Buying a call
- c) Selling a call
- d) Buying a put

6- If the stock makes a dividend payment before the expiration date, then the put-call parity relation is:

- a) Value of put = Value of call + present value (PV) of exercise price - PV of dividend - share price
- b) Value of put = Value of call + present value (PV) of exercise price + PV of dividend - share price
- c) Value of put = Value of call - present value (PV) of exercise price - PV of dividend - share price
- d) Value of put = Value of call + present value (PV) of exercise price - PV of dividend + share price.



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- III) Net income accrues to shareholders, calculated after interest expense; free cash flow is calculated before interest.
- IV) Net income is calculated after various noncash expenses, including depreciation; FCF adds back depreciation.

- a) I and II only
- b) I, II and III only
- c) III and IV only
- d) I only

2- Consider the following data:

FCF1 = \$40 million;

FCF2 = \$40 million;

FCF3 = \$40 million.

Assume that free cash flow grows at a rate of 5% for year 4 and beyond. If the weighted average cost of capital is 10%, calculate the value of the firm.

- a) 700.526
- b) 730.579
- c) 939.474
- d) 415.026



3- Consider the following data for CDA Company:

| Year | 1 | 2 | 3 | 4 |
|---------|-----|-----|-----|-------|
| FCF (M) | \$2 | \$3 | \$4 | \$4.2 |

A constant growth rate of 5% is sustained forever after year 3 and the weighted average cost of capital is 10%.

What is the value of the firm?

- a) 64.676
- b) 70.413
- c) 67.408
- d) 91.303

4- From a geometric viewpoint, how is the position diagram for a put option related to the diagram of a call option on the same stock having the same exercise price and maturity?

- a) Unrelated to the call diagram no matter what the exercise
- b) Exactly the same as the call diagram for the given exercise price
- c) The inverse of the call diagram
- d) The mirror image of the call diagram, reflected around the exercise price

5- Selling a call option, selling the present value of the exercise price in T-bills, and buying the underlying share is the same as:

- a) selling the put
- b) buying a put and a share
- c) buying a call and a put
- d) buying the put

6- If the stock makes a dividend payment before the expiration date, then the put-call parity relation is:

- a) Value of call = value of put + share price + PV of dividend - PV of exercise price
- b) Value of call = value of put + share price + PV of dividend + PV of exercise price
- c) Value of call = value of put - share price + PV of dividend - PV of exercise price
- d) Value of call = value of put + share price - PV of dividend - PV of exercise price



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- IV) Net income is never negative; free cash flows can be negative for rapidly growing firms, even if the firm is profitable, because investments can exceed cash flows from operations.

- a) I only
- b) II and III only
- c) I and II only
- d) All the above

2- Consider the following data:

FCF1 = \$50 million; FCF2 = \$50 million; FCF3 = \$50 million. Assume that free cash flow grows at a rate of 5% for year 4 and beyond. If the weighted average cost of capital is 12%, calculate the value of the firm.

- a) 618.338
- b) 870.092
- c) 431.495
- d) 653.927



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3- Consider the following data for WYZ Company:

| <i>Year</i> | 1 | 2 | 3 | 4 |
|----------------|----------|----------|----------|----------|
| <i>FCF (M)</i> | \$1 | \$4 | \$6 | \$6.3 |

After year 3, a constant growth rate of 5% is sustained forever and the weighted average cost of capital is 12%. Calculate the value of the firm.

- a) \$72.413
- b) \$65.549
- c) \$68.142
- d) \$98.352

4- From a geometric viewpoint, a put diagram normally has:

- a) Zero values in the upper nodes
- b) Positive values in the upper nodes
- c) Positive values in the lower nodes
- d) None of the above

5- Selling a put option, investing the present value of the exercise price in T-bills, and short-selling the underlying share is the same as:

- a) buying a call and a put
- b) buying the call
- c) selling the call
- d) buying a put and a share

6- If the stock makes a dividend payment before the expiration date, then the put-call parity relation is:

- a) Value of put = Value of call + present value (PV) of exercise price - PV of dividend - share price
- b) Value of put = Value of call - present value (PV) of exercise price - PV of dividend - share price
- c) Value of put = Value of call + present value (PV) of exercise price + PV of dividend - share price
- d) Value of put = Value of call + present value (PV) of exercise price - PV of dividend + share price