

# External Examination Cover Sheet

|   |                |  |                                  |
|---|----------------|--|----------------------------------|
| <b>COURSE:</b><br>FINA 210  | <b>NUMBER:</b> | <b>SECTION(S):</b> Online/eConcordia   |                                  |
| <b>EXAMINATION:</b><br><input checked="" type="checkbox"/> FINAL<br><input type="checkbox"/> DEFERRED<br><b>VERSION:</b> External   | <b>DATE:</b>   | <b>Exam Length:</b><br>3 Hours.  | <b>PAGES:</b><br>Including cover |
| <b>MATERIALS ALLOWED:</b><br><input type="checkbox"/> Booklets<br><input type="checkbox"/> IBM (Scantron)*** (not included)<br><input type="checkbox"/> Printed Translation Dictionary Other _____<br><input type="checkbox"/> Calculator<br><input type="checkbox"/> Other _____ |                | <b>INSTRUCTIONS:</b><br><input checked="" type="checkbox"/> Return all<br><input type="checkbox"/> Answer on Exam<br><input type="checkbox"/> Open book<br><input type="checkbox"/> Crib sheet Details _____ |                                  |

**Print your name and student I.D. number in the appropriate spaces below.**

**STUDENT NAME:** \_\_\_\_\_

**I.D. NO.** \_\_\_\_\_

## SPECIAL INSTRUCTIONS:

\*\*\* Scantrons are not included. Therefore, the student can simply circle their answers directly on the exam booklet, or the institution can provide their own scantron sheet.

Students are required to bring a valid picture ID when they present themselves to write the exam.

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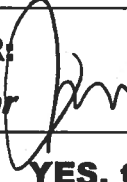
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# CONCORDIA UNIVERSITY

|   |                                    |  |                       |
|---|------------------------------------|--|-----------------------|
| <b>COURSE:</b><br><b>FINA</b>   | <b>NUMBER:</b><br><b>210</b>       | <b>SECTION:</b><br><b>CX</b>                   |                       |
| <b>FINAL EXAM</b><br><b>Version B</b>   | <b>DATE:</b><br><b>AUGUST 2015</b> | <b>TIME:</b><br><b>3 hours</b>                 | <b># OF PAGES: 18</b> |
| <b>PROFESSOR:</b><br><i>J. Mannadiar</i>   |                                    | <b>DIVISION:</b><br><b>JMSB and eCONCORDIA</b> |                       |
| <b>MATERIALS ALLOWED: YES, translation dictionary ONLY</b>  |                                    |  |                       |
| <b>2 CALCULATORS ALLOWED: YES, silent, cordless, non-programmable</b>   |                                    |  |                       |
| <b>SPECIAL INSTRUCTIONS (MUST READ)</b>   |                                    |  |                       |
| 1. <u>All your answers must be recorded in PENCIL on the computer answer sheet by darkening the appropriate letter corresponding to your choice. Only letters a, b for True and False AND Yes and No questions. DARKENING ANY OTHER LETTER WILL RESULT IN AN INCORRECT RESPONSE BEING RECORDED FOR THAT QUESTION.</u> |                                    |  |                       |
| 2. <u>Cell phones (ALL KINDS) must be turned off, programmable calculators and PDAs are not allowed during the final exam. Please leave these in your bag and away from your desk. Calculator manuals NOT ALLOWED</u>   |                                    |  |                       |
| 3. <u>Fill in your name and other required information in PENCIL on the Computer Answer sheet as well as on this cover sheet.</u>   |                                    |  |                       |
| 4. This exam contains 18 pages including cover page. Formulas are on page 2. Please ensure that there are no pages missing.   |                                    |  |                       |
| 5. There is no negative marking on the multiple choice questions. <u>Mark only one answer on the computer answer sheet. Blank questions or those with multiple answers will not receive credit.</u>   |                                    |  |                       |
| 6. Small differences may exist due to rounding. To minimize this problem, keep 6 decimal places calculations until the very end.  |                                    |  |                       |
| 7. <u>STUDENTS MUST RECEIVE A GRADE OF AT LEAST 40% ON THE FINAL EXAM TO PASS THE COURSE</u>  |                                    |  |                       |

**STUDENT NAME:** \_\_\_\_\_

**STUDENT I.D.#:** \_\_\_\_\_

MUST COMPLETE NAME AND ID  
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|  |
|--|
| <b>FINA 210 FINAL EXAM FORMULA SHEET</b> |
|--|

### Effective Annual Rate

$$EAR = \left[ 1 + \frac{NOM}{m} \right]^m - 1$$

### Future Value

$$FV = (1+r)^n * PV$$

### Future Value Annuity

$$FV_{annuity} = \frac{(1+r)^n - 1}{r} \cdot (\text{payment amount})$$

### Present Value

$$PV = \frac{1}{(1+r)^n} * FV$$

### Present Value Annuity

$$PV_{annuity} = \frac{1 - (1+r)^{-n}}{r} \cdot (\text{payment amount}).$$

$$WACC = rd(1 - T)(LVR) + re(1 - LVR)$$

| <b>OLD RULES</b><br>On/before December 31, 1987 | <b>NEW RULES</b><br>After December 31, 1987 |
|---|---|
| Class 3 CCA rate 5%                             | Class 3 CCA rate 4%                         |
| Declining balance method                        | Declining balance method                    |
| Full-Year Rule                                  | Half-Year Rule                              |
| Capital Gains 75%, then became 66.67%           | Capital Gains 50%                           |
| No put-in-use                                   | Put-in-use in effect                        |

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Question #1

Which of the following is a type of real estate?

- a. Land
- b. Retail
- c. Office
- d. Residential
- e. All of the above ✓

Question #2

The purchase documents will deal with which of the following?

- a. Loan
- b. Mode or frequency of payment
- c. Term and Interest rate
- d. Selling price ✓
- e. None of the above

Question #3

The mortgage documents has nothing to do with:

- a. Equity investor
- b. The real estate property
- c. Bank
- d. Government ✓
- e. All of the above

Question #4

Mortgage laws are there to protect the bank, investor and government.

- a. True
- b. False ✓

Question #5

Which of the following consider capital cost allowance, when applying the decision-making criteria in the real estate investment process?

- a. Payback period approach
- b. Gross Income approach
- c. Net Income approach
- d. Sales comparable approach
- e. None of the above ✓

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Question #6

Which of the two environments deals with the taxation and loan-to-value of the project?

- a. Legal & Taxation
- b. Legal & Financing
- c. Market & Financing
- d. Market & Taxation
- e. None of the above ✓

Question #7

The equity investor could be an individual and / or any forms of business organization. What is another name for this equity investor?

- a. Broker
- b. Government
- c. Lender
- d. Notary
- e. None of the above ✓

Question #8

The participant called "government" could be any of the following:

- a. Federal, Provincial, International
- b. Federal, County, Municipality
- c. Provincial, Municipality, District
- d. Global, Federal, Provincial
- e. None of the above ✓

Question #9

The mortgage lender could loan you money on a short-term basis or long-term basis (maturity). What would you choose to avoid risk?

- a. Nominal rates comes with longer maturities
- b. Effective rates comes with short terms
- c. Low rates comes with long maturities ✓
- d. All of the above
- e. None of the above

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Question #10

The major participant that has to deal with wealth taxation and income taxation is the:

- a. Notary
- b. Mortgage lender
- c. Municipality
- d. Tenant
- e. None of the above ✓

Question #11

What is the future value of an annuity, \$1,500 per annum for 9 years, assuming end of year payments? Interest rate is 10.75 percent per annum.

- a. \$21,023 ✓
- b. \$23,318
- c. \$21,067
- d. \$20,803
- e. None of the above

Question #12

Using appraisal values may lead to understating the expected return because appraisal values are usually understated.

- a. True
- b. False ✓

Question #13

Companies invest in real estates as part of their portfolios because there is limited number of good stocks and bonds and appraisal values can be used to estimate the expected return.

- a. True ✓
- b. False

Question #14

Studies have shown that companies invest in real estate as part of their portfolios because real estate investments are not correlated with the markets.

- a. True
- b. False ✓

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Question #15

Rent income is less certain when compared with other income and that is probably one of the reasons why real estate investments are less risky than the other investments in the market.

- a. True
- b. False ✓

Question #16

The notary finalizes the transaction between the buyer, the bank and the broker.

- a. True
- b. False ✓

Question #17

When will the nominal rate per annum be greater than the effective rate of return?

- a. This is not possible, nominal rate is less than effective rate of return
- b. When there is no compounding at all per annum
- c. When the compounding period per annum is between zero and one ✓
- d. When the compounding period per annum is negative
- e. All of the above

Question #18

Which of the following is a variable in the time value of money calculations?

- a. Payment ✓
- b. Purchase price and Down payment
- c. Term and Interest rate
- d. All of the above
- e. None of the above

Question #19

If the nominal rate is 8.20 percent every four months, what is the effective annual rate?

- a. 32.08%
- b. 37.06% ✓
- c. 26.96%
- d. 26.67%
- e. None of the above

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Question #20

What is the present value of an annuity, of \$2,050 per annum for 10 years, assuming end of year payments? Interest rate is 8.00 percent per annum.

- a. \$13,360
- b. \$13,420
- c. \$14,091
- d. \$13,756
- e. None of the above ✓

Question #21

All costs are required to be accumulated before the calculations of capital cost allowance. This concept is called:

- a. Declining balance method
- b. Full-Year rule method
- c. Half-Year rule method
- d. Cost method
- e. None of the above ✓

Question #22

Which two of the valuation methods are often used in the evaluation of industrial (manufacturing or factory) properties?

- a. Sales comparable approach and Cost approach
- b. Gross income approach and Return on Investment approach
- c. Market comparable approach and Net Income approach
- d. Payback Period method and Cost approach ✓
- e. None of the above

Question #23

The asking price is \$250,000 and the property was sold at a 8 percent discount. The loan-to-value ratio is 70 percent and the processing fees are 2 percent of loan. How much must you borrow if you have cash on hand?

- a. \$161,000 ✓
- b. \$157,780
- c. \$154,560
- d. \$159,250
- e. None of the above

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Question #24

You purchased a property for 90 percent of the asking price of \$250,000. You put down 20 percent of the purchase price as down payment. Processing fees is 1.80 percent of loan. How much did the bank give you on signing the loan agreement, assuming you have cash on hand?

- a. \$180,000
- b. \$177,600
- c. \$172,832
- d. \$157,440
- e. None of the above ✓

Question #25

One of the real estate pricing issues is due to the problems with real estate data, such as, the use of appraisal values instead of actual values; long-run evaluations; small sample size; and evaluating the real estate investments on a unlevered (without financing) basis. Do you agree with all the above reasons?

- a. Yes ✓
- b. No

Question #26

The law of agency discusses the obligations between the principal, the broker and the third party.

- a. True
- b. False ✓

Question #27

The debt service schedule and the mortgage laws schedule is prepared by the \_\_\_\_\_ for the \_\_\_\_\_.

- a. Tenant; equity investor
- b. Mortgage lender; tenant
- c. Mortgage lender; government
- d. Insurance agent; equity investor
- e. None of the above ✓

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Question #28

The third party agrees with the principal to hire the same notary to minimize the broker's fees, which must be paid when notary brings in a ready, willing and able buyer.

- a. True
- b. False ✓

Question #29

The broker does not have to pay the notary fees if the transaction did materialize even if the buyer wants to buy and has the money for it.

- a. True ✓
- b. False

Question #30

Use the information below to answer the following question.

Asking Price \$800,000

Purchase Price \$750,000

Loan-to-value ratio (LVR) of 85%

Interest rate (nominal) per annum are as follows: ~

Year 1. 7.20% per annum compounded semi-annually

Year 2. 6.50% per annum compounded semi-annually

Year 3. 8.35% per annum compounded semi-annually

Mortgage payment paid annually

Term of loan 10 years

What is the principal portion of the 2<sup>nd</sup> mortgage payment?

- a. \$52,437
- b. \$50,246 ✓
- c. \$46,726
- d. \$39,110
- e. None of the above

Question #31

The company acquired a property for \$600,000. The land costs are 25% of the value and the balance is building. What is the capital cost allowance for Year 2 if the capital cost allowance is 18% declining balance method; half-year rules applies and put-in-use in effect (new rules)?.

- a. \$98,280
- b. \$81,000
- c. \$75,600
- d. \$73,710 ✓
- e. None of the above

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Question #32

Use the information below to answer the following question.

Property value \$700,000

Loan-to-value ratio (LVR) of 65%

Interest rate (nominal) per annum are as follows: ~

Year 1. 8.35% per annum compounded semi-annually

Year 2. 7.20% per annum compounded semi-annually

Year 3. 6.80% per annum compounded semi-annually

Mortgage payment paid annually

Term of loan 15 years

What is the interest portion of the 3<sup>rd</sup> mortgage payment?

- a. \$28,553
- b. \$29,039 ✓
- c. \$32,171
- d. \$36,754
- e. None of the above

Question #33

The exclusive right-to-sell listing means that the owner can sell the property and do not have to pay the commission to the agent.

- a. True
- b. False ✓

Question #34

Use the information below to answer the following question.

Asking price \$600,000

Property sold for 94% of asking price

Loan-to-value ratio (LVR) of 85%

Interest rate (nominal) per annum is 7.80% per annum compounded semi-annually

Mortgage payment paid annually

Term of loan 16 years

What is the mortgage payment per annum?

- a. \$56,521
- b. \$55,368
- c. \$54,570
- d. \$53,995 ✓
- e. None of the above

Question #35

Use the information below to answer the following question.

Property value \$760,000

Loan-to-value ratio (LVR) of 80%

Processing fees 2% of loan

Interest rate (nominal) per annum is 6.95% per annum compounded semi-annually

Mortgage payment paid annually

Term of loan 20 years

What is the loan balance after 3 mortgage payments?

- a. \$560,655 ✓
- b. \$560,165
- c. \$552,306
- d. \$548,962
- e. None of the above

Question #36

Use the information below to answer the following question.

You have cash on hand

Property value \$500,000

Loan-to-value ratio (LVR) of 75%

Interest rate (nominal) per annum is 7.50% per annum compounded semi-annually

Processing fees is 3.50% of loan

No cancellation penalty

Mortgage payment paid annually

Term of loan 15 years

What is the effective cost of borrowing (ECB)?

- a. 8.01%
- b. 8.05%
- c. 8.10%
- d. 8.22% ✓
- e. None of the above

Question #37

Use the information below to answer the following question.

You have cash on hand

Property value \$500,000

Down payment is \$200,000

Loan #1 = \$200,000

Loan #2 = \$100,000

Interest rate (nominal) for Loan #1 is 8.80% per annum compounded semi-annually

Interest rate for Loan #2 is 9% per annum compounded semi-annually

Processing fees is 1.20% of loans

Cancellation penalty 1.50% of mortgage balances

Mortgage payment paid annually

Term of loans 12 years

What is the effective cost of borrowing (ECB)?

- a. 9.30%
- b. 9.00%
- c. 8.93%
- d. 8.89%
- e. None of the above ✓

Question #38

The construction of a building costing \$12,000,000 started in Year 1 and was completed and occupied in Year 2 (two years constructions). \$9,000,000 of the construction costs was incurred in Year 1 and the balance in Year 2.

Using the old rules or system (5% CCA rate, declining balance method, full year rule and no put-in-use), what is the capital cost allowance (CCA) in Year 3?

- a. \$551,000
- b. \$561,500
- c. \$570,225
- d. \$578,615
- e. None of the above ✓

Question #39

The construction of a building costing \$12,500,000 started in Year 1 and was completed and occupied in Year 2 (two years constructions). \$8,000,000 of the construction costs was incurred in Year 1 and the balance in Year 2.

Using the new rules or system (4% CCA rate, declining balance method, half-year rule and put-in-use in effect), what is the capital cost allowance (CCA) in Year 3?

- a. \$499,200
- b. \$490,000 ✓
- c. \$480,000
- d. \$470,400
- e. None of the above

Question #40

Use the information below to answer the following question.

You have cash on hand

Property value \$800,000

Loan-to-value ratio is 75%

Interest rate (nominal) is 8.75% per annum compounded semi-annually

Processing fees is 2% of loan

Cancellation penalty is 3.00% of outstanding mortgage balance

Mortgage payment paid annually

Term of loan 13 years

What is the effective cost of borrowing (ECB), if you stayed for 4 years?

- a. 10.96%
- b. 10.74%
- c. 10.35%
- d. 10.17% ✓
- e. None of the above

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Question #41

Use the information below to answer the following question.

You have cash on hand

Property value \$500,000

Loan-to-value ratio is 72%

Interest rate (nominal) is 6.60% per annum compounded semi-annually

Processing fees is 1.80% of loan

Cancellation penalty is 1.50% of outstanding mortgage balance

Mortgage payment paid annually

Term of loan 15 years

How much do you owe the bank if you leave at the end of Year 7?

- a. \$233,339
- b. \$234,778
- c. \$237,853
- d. \$238,556 ✓
- e. None of the above

Question #42

Use the information below to answer the following question.

- 30,000 rentable space
- \$25 rent per square foot
- 12% vacancy and credit losses
- operating expenses (without depreciation or CCA) is 36% of effective gross income
- Asking price is \$840,000
- Property sold for 74% of asking price

What is the buyer's overall capitalization rate (OCR)?

- a. 72%
- b. 70%
- c. 65%
- d. 64%
- e. None of the above ✓

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Question #43

Use the information below to answer the following question.

- 25,000 rentable space
- \$25 rent per square foot
- 12% vacancy and credit losses
- operating expenses (without depreciation or CCA) is 30% of effective gross income
- Asking price is \$750,000
- Property sold for 80% of asking price

What is the seller's expected gross income multiplier (GIM)?

- a. 1.22
- b. 1.34
- c. 1.36
- d. 1.42
- e. None of the above ✓

Question #44

A property has 21,000 square feet of rental space. The vacancy and credit losses is expected at 9% and operating cost (without capital cost allowance) is 31 percent of effective gross income.

Financing details for this property is as follows: down payment is 30%; the loan is \$400,000; Interest rate is 10% per annum compounded semi-annually; term of loan is 12 years.

The cost of the down payment is 6.50% above the effective cost of borrowing and 50% of the capital gains is taxed.

What is the net operating income if the rate is \$29 per square foot for the first 12,000 square feet of space and \$24 per square feet for the balance?

- a. \$369,619
- b. \$366,860
- c. \$363,658
- d. \$354,136 ✓
- e. None of the above

Question #45

A property has 21,000 square feet of rental space. The vacancy and credit losses is expected at 8% and operating cost (without capital cost allowance) is 28 percent of effective gross income.

Financing details for this property is as follows: down payment is 28%; the property value is \$500,000; Interest rate is 11.80% per annum compounded semi-annually; term of loan is 10 years.

The cost of the down payment is 6.50% above the effective cost of borrowing and 50% of the capital gains is taxed.

What is the effective cost of borrowing if you have cash on hand and there is a 3% processing fees on the loan?

- a. 12.90% ✓
- b. 13.12%
- c. 13.46%
- d. 13.67%
- e. None of the above

Question #46

Use the information below to answer the following question.

- 27,000 rentable space
- \$24 rent per square foot
- 14% vacancy and credit losses
- operating expenses (without depreciation or CCA) is 36% of effective gross income
- Asking price is \$850,000
- Property sold for 90% of asking price

What is the seller's expected net income multiplier (NIM)?

- a. 2.14 ✓
- b. 2.30
- c. 2.54
- d. 2.78
- e. None of the above

Question #47

Use the information below to answer the following question.

- 30,000 rentable space
- \$24 rent per square foot
- 10% vacancy and credit losses
- operating expenses (without depreciation or CCA) is 49% of effective gross income
- Asking price is \$650,000

If the buyer got his expected overall capitalization rate of 58%, how much did the seller receive for the property?.

- a. \$579,379
- b. \$581,700
- c. \$588,800
- d. \$595,102
- e. None of the above ✓

Question #48

A property has 21,000 square feet of rental space. The vacancy and credit losses is expected at 8% and operating cost (without capital cost allowance) is 28 percent of effective gross income.

Financing details for this property is as follows: down payment is 25%; the property value is \$400,000; Interest rate is 11% per annum compounded semi-annually; term of loan is 12 years.

The cost of the down payment is 5.80% above the effective cost of borrowing and 50% of the capital gains is taxed.

What is the weighted cost of capital if the tax rate is 40%; there are no processing fees and you have cash on hand?

- a. 9.90%
- b. 9.75%
- c. 9.65%
- d. 9.36%
- e. None of the above ✓

Question #49

A property has 20,000 square feet of rental space. The cost of rent is \$30 per square foot. The vacancy and credit losses is expected at 10% and operating cost (without capital cost allowance) is 35 percent of effective gross income.

Financing details for this property is as follows: Loan-to-value ratio is 64%; the loan is \$325,000; Interest rate is 9% per annum compounded semi-annually; term of loan is 10 years. There are no processing fees.

The cost of the down payment is 8.00% above the effective cost of borrowing and 50% of capital gains is taxed, and the tax rate is 40%.

What is the market value of the property using the net income approach?

- a. \$2,738,483
- b. \$2,775,862
- c. \$2,915,038
- d. \$2,924,391
- e. None of the above ✓

Question #50

The asking price of a property is \$700,000 and you are given the following information for a sales comparable evaluation.

- Property prices increases at 2.60% per annum (inflation rate)
- \$56 per square foot
- \$22,000 per year reduction for age
- Two-car garage valued at \$42,000 compared to \$25,000 for a one-car garage
- Corner property warrants a 15% premium
- Swimming pool worth \$30,000 considered a good selling point in this neighborhood

|                    | Comparable   | Subject Property |
|--------------------|--------------|------------------|
| Selling Price      | \$650,000    | See above        |
| Sold               | 7 months ago | See above        |
| Location           | middle       | corner           |
| Size (square feet) | 15,800       | 15,600           |
| Age (years)        | 10           | 12               |
| Garage             | Two-car      | one-car          |
| Swimming pool      | no           | yes              |

What is the estimated value of the subject property using the sales comparable approach?.

- a. \$713,283
- b. \$725,581
- c. \$742,742
- d. \$771,342
- e. None of the above ✓

**End of Exam**