



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya

Tel: +254(0) 799 529 958, +254(0) 799 529 959, + 254 (0) 712 524 293,

Website: [info@must.ac.ke](mailto:info@must.ac.ke) Email: [info@must.ac.ke](mailto:info@must.ac.ke)

---

## University Examinations 2023/2024

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF  
BACHELOR OF COMMERCE

### BFC 3481: REAL ESTATE FINANCE

DATE: APRIL 2024

TIME: 2 HOURS

---

INSTRUCTIONS: Answer question *one* and any other *two* questions

---

#### QUESTION ONE (30 MARKS)

- a) Describe the features of balloon loan in mortgage financing (6 marks)
- b) Discuss the adverse claims to property or other title defects, that will not be evident from a search of property records but which might be detected by inspection of the property and its occupants. (8 marks)
- c) You are considering the purchase of a quadruplex apartment building. Effective gross income during the first year of operations is expected to be Kshs 33,600 (Kshs 700 per month per unit). First-year operating expenses are expected to be Kshs 13,440 (at 40 percent of EGD). Ignore capital expenditures. The purchase price of the quadruplex is Kshs 200,000. The acquisition will be financed with Kshs 60,000 in equity and a Kshs 140,000 standard fixed-rate mortgage. The interest rate on the debt financing is eight percent and the loan term is 30 years. Assume the payments will be made annually and that there are no up-front financing costs.

#### Required:

---

Meru University of Science & Technology is ISO 9001:2015 and ISO/IEC 27001:2013 Certified

Foundation of Innovations

Page 1

Calculate the following

- (i) Overall capitalization rate (3 marks)
- (ii) Effective gross income multiplier (3 marks)
- (iii) Before equity dividend rate (4 marks)
- (iv) Debt coverage ratio (3 marks)
- (v) Assume the lender requires a minimum debt coverage ratio of 1.2. What is the largest loan that you could obtain if you decide to borrow more than Kshs140,000? (3 marks)

**QUESTION TWO (20 MARKS)**

- a) Explain how rights differ from power or force, and from permission. (10 marks)
- b) A public-school building with a total area of 100m<sup>2</sup> is 12 years old and need to be valued for sale. The estimated economic life is 120 yrs. It stands on an area of land measuring 5 ha. Vacant land in the same area has been selling at Kshs 1.1 m per ha. Current construction cost for similar building average Kshs 160,000 per square meter. Estimate the value using cost approach. (10 marks)

**QUESTION THREE (20 MARKS)**

The following data was extracted from the book of real estate proprietor: Cash flow from operations:

Year	1	2	3	4	5
NOI	Kshs150,000	Kshs150,000	Kshs150,000	Kshs150,000	Kshs150,000
Debt Service	Kshs125,000	Kshs125,000	Kshs125,000	KShs.125,000	Kshs125, 000

Cash Flow at sale:

Sale Price:	Kshs 2,000,000
Cost of sale:	Kshs125,000
Mortgage balance:	Ksh 1,500,000

- a) Assuming the going-in capitalization rate is 8.00 percent, compute a value for the property using direct capitalization. (4 marks)

b) Assuming the required yield/return on unlevered cash flows is 10 percent, and that the property will be held by a buyer for five years, compute the value of the property based on discounting unlevered cash flows. (8 marks)

c) Assuming the relevant required yield/return on levered cash flows is 15 percent, and that the property will be held by a buyer for five years, what is the present value of the levered cash flows? (8 marks)

**QUESTION FOUR (20 MARKS)**

a) Explain the differences between collateralized mortgage obligation and collateralized debt obligation (6 marks)

b) Write short notes on the following:

(i) Fall out risk (6 marks)

(ii) Encumbrances (6 marks)

**QUESTION FIVE (20 MARKS)**

a) Explain the 3Cs of traditional residential underwriting criteria (6 marks)

b) You own a parcel of land that a local farmer has offered to rent for the next 10 years. The farmer has offered to pay Kshs 20,000 today or an annuity of Kshs 3,200 at the end of each of the next 10 years. Which payment method should you accept if his required rate of return is 10 percent? (8 marks)

c) You are thinking about purchasing some vacant land. You expect to be able to sell the land ten years from now for Kshs 500,000. What is the most you can pay for the land today if your required rate of return is 15 percent? (3 marks)

d) What is the expected (annualized) return on this investment over the 10-year holding period if you purchase the land for Kshs 170,000? (3 marks)