



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING BANKING AND FINANCE

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

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**BAC414: REAL ESTATE FINANCE**

**DATE:**

**TIME:**

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## INSTRUCTIONS:

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

### QUESTION ONE (COMPULSORY) (30 MARKS)

- a) A warehouse that would cost sh.30.5 million to construct today has depreciated by 25% in its lifetime and is on a land valued at sh.11 million. What is the property's value by the cost approach? (3 marks)
- b) The Net Operating Income (NOI) of a warehouse is expected to be sh.1 million per year over the next four years because of an existing lease. At the beginning of the fifth year, NOI is expected to rise to sh.1.2 million and grow at 3% annually thereafter. Assuming investors require a 13% return, calculate the value of the property today assuming the warehouse is sold after four years. Calculate the total value of the warehouse today. (5 marks)
- c) What purpose does title assurance serve? (4 marks)
- d) Explain the meaning of mortgage foreclosure and the alternatives available to such action. (5 marks)
- e) John is considering the purchase of a lot. He can buy the lot today and expects the price to rise to ksh.35,000 at the end of six years. He believes that he should earn an investment yield of 14 percent annually on his investment. The asking price for the lot is ksh.15,000. Should he buy it? (13 marks)

### QUESTION TWO (20 MARKS)

- a) Using relevant examples discuss the classification of real estates in Kenya (6 marks)
- b) Identify the determinants of mortgage interest rates when pricing and structuring mortgage loans. (4 marks)
- c) X corporation is considering purchase of an interest in a real estate syndication at a price of ksh.60,000. In return, the syndication promises to pay ksh.540 at the end of each month for the next 20years (240months). If purchased: (10 marks)
- What would be the rate of return, compounded monthly, on this investment?
  - How much total cash would be received on the investment?
  - How much is profit and how much is capital recovery?

### QUESTION THREE (20 MARKS)

- a) Explain the motivations of investing in income properties (4 marks)
- b) An encumbrance on a title makes it unmarketable. Explain. (4 marks)
- c) Assume that a mortgage loan for ksh.60,000 is made for 30years at 10% interest. Such a mortgage would require monthly payments of about ksh.527 per month. According to the consensus of lenders in the market place, the prevailing interest rate is 10% which is adequate to compensate them of any risks. However, an unanticipated inflation occurs warranting a 12% interest instead of 10%. What is the magnitude of the loss to the lender? (12 marks)

### QUESTION FOUR (20 MARKS)

- a) A fully amortizing mortgage loan is made for sh.100,000 at 6% interest for 30 years. Determine payments for the following periods if interest is accrued. (10 marks)
- i.) Monthly ii.) Quarterly.
- b) An investor has the opportunity to make an investment that will provide an effective annual yield of 8%. He/she is considering two other investments of equal risk that will provide compound interest monthly and semiannually, respectively. What should the equivalent annual interest rate be for each of these two investments to ensure that an equivalent annual yield of 8% is earned? (10 marks)

### QUESTION FIVE (20 MARKS)

- a) A pension fund is making an investment of shs10,000 today and expects to receive sh.1,600 at the end of each month for the next five years. At the end of the fifth year, the capital investment of sh.100,000 will be returned. What is the internal rate of return compounded annually on this investment? (8 marks)

- b) A borrower is faced with choosing between two loans. Loan A, is available for ksh.100,000 at 12% interest per annum for 30 years, with a 1% to be included in closing costs. Loan B, would be made for the same amount, but for 11.5% interest per annum for 25 years, with 3% to be included in the closing costs:
- (i) If the loan is repaid after three years, which loan would be a better choice?  
(6 marks)
  - (ii) If it is repaid after five years, which loan would be a better choice?  
(6 marks)