

Instructions: Answer question ONE and any other THREE questions

**QUESTION ONE**

- a) Define real estate as an asset and explain how its characteristics affect its value and financing. (5 marks)
- b) Calculate the monthly payment on a 30-year fixed mortgage of sh 200,000 at an annual interest rate of 6%. (3 marks)
- c) What is a real estate investment trust (REIT) explain its main benefits to investors. (5 marks)
- d) The borrower's debt-to-income (DTI) ratio is 43%, their credit score is 760, and their income history is steady. Explain how these elements affect the determination of the mortgage application's underwriting. (6 marks)
- e)
- f) Assume an investor might buy a parking lot that is expected to generate sh 250,000 in NOI. There are three existing comparable income-producing parking lots:
  - i) Parking lot 1 has a NOI of sh 300,000 and a sale price of sh 3.5 million.
  - ii) Parking lot 2 has a NOI of sh 500,000 and a sale price of sh 4.95 million.
  - iii) Parking lot 3 has a NOI of sh 285,000 and a sale price of sh 2.5 million.Using capitalization rate determine the market value of the property (6 marks)  
(25 marks)

**QUESTION TWO**

- a) Calculate the loan-to-value (LTV) ratio for a property purchased at sh 400,000 with a sh 320,000 mortgage. (4 marks)
- b) Discuss how economic conditions, such as interest rates and unemployment levels, affect property appraisal values. (6 marks)
- c) Explain the function of the secondary mortgage market and how it supports liquidity in the real estate industry. (5 marks)  
(15 marks)

**QUESTION THREE**

- a) A man borrows sh 2,200,000 to purchase a car at an annual rate of interest of 16%. He will pay back the loan through yearly installments over 5 years, with the first installment to be made one month after the loan is released. Prepare a loan amortization table for the 5 years. (8 marks)
- b) Explain the risks and benefits of adjustable-rate mortgages (ARMs) compared to fixed-rate mortgages from the perspective of both borrowers and lenders. (7 marks)  
(15 marks)

**QUESTION FOUR**

- a) After John buys a property, he learns that his neighbor has the legal right to cross his property line to access their property.
- i) What kind of property rights are represented by this situation? (2 marks)
  - ii) What type of property right does this scenario represent? (2 marks)
  - iii) Explain its implications for John's ownership. (2 marks)
- b) How does bankruptcy differ from foreclosure in terms of legal and financial implications for the borrower? (4 marks)
- c) A company wants to provide a retirement plan for an employee who is aged 50 now. The plan will provide her with an annuity-immediate of sh 90,000 every year for 16 years upon her retirement at the age of 60. The company is funding this plan with an annuity due of 8 years. If the rate of interest is 6%, calculate the amount of installment the company should pay. (4 marks)  
(15 marks)

**QUESTION FIVE**

- a) A borrower has a hybrid mortgage with an initial fixed interest rate of 4% for 5 years, after which the rate adjusts annually based on an index plus a 2% margin. Calculate the new interest rate if the index rate is 3% at the start of year 6. (5 marks)
- b) Compare the key features of fixed-rate and adjustable-rate mortgages and their suitability for different types of borrowers. (6 marks)
- c) Explain the tax implications for borrowers after a foreclosure or a short sale. (4 marks)  
(15 marks)

**QUESTION SIX**

- a) A rental property generates sh 1,200,000 in annual rent. Operating expenses are 30% of gross income. Investors in the area typically require a 7% capitalization rate (5 marks)  
*what is the property value?*
- b) A borrower takes out a sh 350,000 adjustable-rate mortgage. The initial rate is 4%, but after 5 years, the interest rate increases to 6%. How would this change affect the monthly repayment? Assume the loan term is 20 years. (4 marks)
- c) Examine the effects that changes in market interest rates have on the housing market, in addition to the actions of real estate investors and homebuyers. (6 marks)  
(15 marks)

DEC. 2023

**BBM 411/ECF 415: REAL ESTATE FINANCE**

**MAIN EXAMINATION**

**Instructions: Answer question ONE and any other THREE questions**

**QUESTION ONE**

- a) Discuss the performance measurement for real estate investments (5 marks)
- b) Calculate the present value of an annuity-immediate of amount sh10,000 payable quarterly for 10 years at the annual rate of interest of 8% convertible quarterly. (3 marks)
- c) Explain why real estate returns are unlike those of stocks. (4 marks)
- d) Assume an investor might buy a parking lot expected to generate sh 500,000 in NOI.

There are three existing comparable income-producing parking lots:

- i) Parking lot 1 has a NOI of sh 250,000 and a sale price of sh 3 million.
- ii) Parking lot 2 has a NOI of sh 400,000 and a sale price of sh 3.95 million.
- iii) Parking lot 3 has a NOI of sh 185,000 and a sale price of sh 2 million.

Using capitalization rate to determine the market value of the property (5 marks)

- e) Suppose that the applicant's annual income is sh 72,000. If monthly taxes and insurance are sh 200 and the housing expense ratio is 33 percent, what is the maximum loan amount that the applicant can afford? Assume a loan term of 30 years and an interest rate of 8 percent. (4 marks)
- f) Explain any FOUR of the risks that are inherent to the real estate sector. (4 marks)

(Total 25 marks)

**QUESTION TWO**

- a) Explain the evolution of the secondary mortgage market (4 marks)
- b) Examine the factors driving real estate property valuation (5 marks)
- c) A company wants to provide a retirement plan for an employee who is aged 55 now. The plan will provide her with an annuity-immediate of sh 70,000 every year for 15 years upon her retirement at the age of 65. The company is funding this plan with an annuity due of 10 years. If the rate of interest is 5%, what is the amount of installment the company should pay? (6 marks)

(Total 15 marks)

**QUESTION THREE**

- a) Examine in detail any **THREE** methods for appraising residential property. (9 marks)
- b) You invested sh 600,000 in asset 1 which produced 80% returns and sh 400,000 in asset 2 which produced 10% returns. Compute:
- portfolio returns and
  - portfolio risk.

(6 marks)

(Total 15 marks)

**QUESTION FOUR**

- a) Explain the main features and characteristics of a typical amortized loan. (6 marks)
- b) Refer to the following information on joint stock returns for Asset A and B

| Economics State | Probability state | Asset A % | Asset B % |
|-----------------|-------------------|-----------|-----------|
| Boom            | 20%               | 22        | 6         |
| Normal          | 55%               | 14        | 10        |
| Recession       | 25%               | 7         | 12        |

- Compute the expected return [E(R<sub>i</sub>)] on these investments, the variance of returns( $\sigma^2$ ), and its standard deviations ( $\sigma$ ). (2 marks)
- Which of the above assets has the highest expected return and which is risky? (2 marks)
- Comment on the correlation coefficient of the two assets. (5 marks)

(Total 15 marks)

**QUESTION FIVE**

- a) You are buying your first house for sh 220,000, and are paying sh 30,000 as a down payment. You have arranged to finance the remaining sh 190,000 30-year mortgage with a 7% nominal interest rate and monthly payments. What are the equal monthly payments you must make? (6 marks)
- b) What are the requisites for managing a Real Estate Investment Trust? (4marks)
- c) Discuss the traditional Financing for real estate development in Kenya. (5 marks)

(Total 15 marks)

**QUESTION SIX**

- a) Explain how the forces of supply and demand in the real estate market affect, and are affected, by the primary lending market. (5 marks)
- b) Explain the advantages and disadvantages of fixed-rate mortgages (4 marks)
- c) Mr Tom takes out an auto loan for sh100,000 and a payment period of 5 years, with an interest rate of 9% compounded annually. Amortize his loan fully. (6 marks)

(Total 15 marks)

**EXAMINATION**

**Instructions: Answer question ONE and any other THREE questions**

**QUESTION ONE**

- a) Discuss the characteristics of Mortgage as applied in real estate investment (4 marks)
- b) Calculate the present value of an annuity-immediate of amount sh10,000 payable quarterly for 10 years at the annual rate of interest of 8% convertible quarterly. (3 marks)
- c) Explain what the investment risk characteristics that must be considered by investors when deciding among alternative investments include. (4 marks)
- d) Discuss the role and importance of private mortgage insurance in the residential mortgage market. (5 marks)
- e) Suppose that the applicant's annual income is sh 72,000. If monthly taxes and insurance are sh 200 and the housing expense ratio is 33 percent, what is the maximum loan amount that the applicant can afford? Assume a loan term of 30 years and an interest rate of 8 percent. (5 marks)
- f) List and briefly describe the typical items included in a commercial mortgage loan application package (4 marks)

(Total 25 marks)

**QUESTION TWO**

- a) Explain the evolution of the secondary mortgage market (4 marks)
- b) Examine the factors that affect demand for properties (5 marks)
- c) A company wants to provide a retirement plan for an employee who is aged 55 now. The plan will provide her with an annuity-immediate of sh 70,000 every year for 15 years upon her retirement at the age of 65. The company is funding this plan with an annuity-due of 10 years. If the rate of interest is 5%, what is the amount of installment the company should pay? (6 marks)

(Total 15 marks)

**QUESTION THREE**

- a) Examine in details the available methods for appraising residential property. (4 marks)
- b) A freehold shop property is currently let on a full repairing and insuring lease with five-year rent reviews at a rent of sh 90,000 per annum with three years to run to the next review. The current rental value is sh 1,200,000 per annum; market evidence suggests a yield of 5.5 per cent. Calculate the capital value of the property. (6 marks)
- c) A man borrows a loan of sh20,000 to purchase a car at annual rate of interest of 6%. He will pay back the loan through monthly installments over 5 years, with the first installment to be made one month after the release of the loan. What is the monthly installment he needs to pay? (5 marks)

(Total 15 marks)

**QUESTION FOUR**

- a) Describe the equity financing for real estate (4 marks)
- b) Tony is considering buying an apartment building and wants to know what it is worth. He estimates his potential gross income to be sh 150,000, miscellaneous income to be sh 12,000, vacancy and collection loss of 5% of PGI and operating expenses of sh80,000. What is the estimated NOI for this property? If Tony's estimated capitalization rate is 6.7%, what is the value of the property? (6 marks)
- c) Write brief notes on the following terms as used in Real Estate Finance; Foreclosure and Bankruptcy. (5 marks)

(Total 15 marks)

**QUESTION FIVE**

- a) There are two mutually exclusive Properties A and B. Each property requires an investment of total costs sh 50,000 and total costs sh 70,000 respectively. Assuming a target rate of return of 11%

**Property A**

| Year        | 1      | 2      | 3      |
|-------------|--------|--------|--------|
| Amount (sh) | 30,000 | 20,000 | 15,000 |

**Property B**

| Year        | 1      | 2      | 3      |
|-------------|--------|--------|--------|
| Amount (sh) | 40,000 | 30,000 | 20,000 |

**Required**

- i) Compute the Benefit-to-Cost Ratios of the two properties (2 marks)
  - ii) Which of the properties would be chosen and why? (4 marks)
  - b) What are the requisites for managing a Real Estate Investment Trusts? (4marks)
  - c) Discuss in the traditional Financing for real estate development in Kenya. (5 marks)
- (Total 15 marks)

**QUESTION SIX**

- a) Joseph has identified a potential real estate investment. The asset will cost sh1,000,000 and will require initial remodeling costs of sh 100,000 per year for the first three years. The investment will generate sh 60,000 per year in revenue. At the end of the project, he will be able to sell the asset for sh 1,700,000. The discount rate is 8%. Should the investor take on the project? (5 marks)
  - b) Examine the pros and cons of Adjustable-Rate Mortgage (4 marks)
  - c) Find the amortization schedule for a sh 80,000 loan amortized in three annual payments, if the interest rate is 4.7% per year compounded annually (round answer to the nearest cent). (6 marks)
- (Total 15 marks)

DEC 2021

**BBM 411: REAL ESTATE FINANCE****MAIN EXAMINATION****FOURTH YEAR, SEMSTER 2****INSTRUCTIONS: ANSWER Question ONE AND ANY THREE Questions****QUESTION ONE**

- a) Examine the key benefits of investing in income producing properties (4 marks)
- b) Find the present value of sh 45,000 received at the end of 6 years, discounted at a 9% annual rate, compounded quarterly. (3 marks)
- c) An investor finds that Class A apartments in the submarket are trading at a 5.6% cap rate. If the NOI of the Class A apartment was sh 8.4 million and the operating expenses of sh 4,500,000. Compute the approximately value of the property. You are provided with the following values.
  - i) Property Value (or Purchase Price): sh 2,500,000
  - ii) Total Revenue: Four units x sh10,000/month in rent = sh 480,000/year
  - iii) Total Expenses:
    - 1) Property manager salary – sh 200,000
    - 2) Cleaning and maintenance – sh 100,000
    - 3) Inspection and broker fees – sh 50,000
  - 1) Required calculate NOI (3 marks)
  - 2) Now, suppose that a similar investment property (B) has the same NOI but a higher Cap Rate of 6.5%. what happened? (5 marks)
- d) Explain fully the underwriting process in real estate finance. (6 marks)
- e) What are the reasons for considering portfolio financing? (4 marks)

**(Total 25 Marks)****QUESTION TWO**

- a) Examine the critical factors impacting on Real Estate Investing (5 marks)
- b) XYZ Company promises to pay a retiring employee sh 10,000 at the end of each year for the next four years followed by sh15,000 at the end of each year for six more years. What is the present value of these future cash flows assuming a discount rate of 9%? (4 marks)
- c) Explain in details any three foreclosure processes (6 marks)

**(Total 15 Marks)**

### **QUESTION THREE**

- a) Discuss any three indicators of performance among the income generating real estate (6 marks)
- b) Examine the overriding features of Adjustable-Rate Mortgages (4 marks)
- c) Evaluate the alternative real estate financing and investment vehicles (5 marks)

**(Total 15 Marks)**

---

### **QUESTION FOUR**

- a) Explain the advantages and disadvantages of the constant Payment Mortgage (CPM) (6 marks)
- b) You expect to receive sh 18,500 as a bonus after 5 years on the job. You have calculated the present value of this bonus and the answer is sh 7,500. What discount rate did you use in your calculation? (3 marks)
- c) Identify and write brief notes on three major techniques of valuing investment properties (6 marks)

**•••(Total 15 Marks)**

### **QUESTION FIVE**

- a) Describe the various classifications available to the intermediaries in the mortgage market in Kenya. (4 mark)
- b) Discuss the applicability of Portfolio consideration in real estate financing (6 marks)
- c) Explain any five important determinants in mortgage pricing. (5 marks)

**(Total 15 Marks)**

### **QUESTION SIX**

- a) A debt of sh 10,000 is amortized by making equal payments at the end of every six months for three years, and interest is 6% compounded semi-annually. Construct an amortization schedule (6 marks)
- b) Discuss with examples the major challenges faced by developers and how it impedes the process of creating affordable homes in developing economies. (5 marks)
- c) Explain the motivation for investing in the income producing properties other than other vehicles of investment in the economy (4 marks)

**(Total 15 Marks)**

**BBM 411: REAL ESTATE FINANCE**

**MAIN EXAMINATION FOR 2018/2019 ACADEMIC YEAR**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY THREE OTHER QUESTIONS**

**QUESTION ONE**

- a) The underwriting process goal is to determine whether the loan-to-value ratio, the payment-to-income ratio, assets of borrower and credit history are acceptable to the lender. Discuss the steps taken in the underwriting process in real estate finance (6 Marks) ✓

- b) The following information is available with regards to a mortgage.

Loan made - \$ 60,000

Loan term - 30 Years

Interest - 12% compounded monthly

Origination fee - 3%

Required:

- i) Calculate the net cash disbursed  
ii) Calculate the monthly repayments  
iii) Calculate the effective interest rate

(2 Marks) ✓

(3 marks) ✓

(4 marks) ✓

- c) The following information is given.

Loan made - \$ 50,000

Loan term - 20 Years

Interest - 12% compounded monthly

Required:

Compute the amount of each monthly payment to be applied to the principal and interest on the monthly loan balance using;

- i) The Fully Amortizing Constant Payment Mortgage Loan (CPM) and prepare a loan schedule for the 1<sup>st</sup> 5 months (5 Marks). ✓

- ii) Constant Amortization Mortgage Loan (CAM) and prepare a loan schedule for the 1<sup>st</sup> 5 months (5 Marks). ✓

(TOTAL= 25 MARKS)

**QUESTION TWO**

- i) Owning real estate carries with it a traditional "bundle of legal rights" transferred with the property from seller to buyer. Discuss the recognized rights of the holder of title to the property (5 Marks).

- ii) Distinguish between the Partially Amortizing, Constant Payment Mortgage (CPM) Loans and Zero Amortizing, or Interest Only—Constant Payment Mortgage (CPM) Loans (4 Marks). ✓
- iii) A borrower and lender agree that a 3,000,000 loan made at 12 percent interest for 30 years will have a 200,000 balance on the maturity date if the loan will be on Constant Payment Mortgage terms. Calculate the amount to be paid monthly (6 Marks). ✓

(TOTAL= 15 MARKS)

### QUESTION THREE

- a) What Constitutes Default in real Estate Finance? (3 Marks).
- b) Once a default has occurred, the mortgagee has several available options. Discuss two options that are mortgagee may take (4 Marks)
- c) There are basically two types of REITS. Discuss the two types of REITS clearly breaking them down to further categories (8 Marks).  
Equity  
Investment

(TOTAL= 15 MARKS)

### QUESTION FOUR

- a) There are a number of reasons that make investors go for debt financing. Discuss (3 Marks).
- b) Most funds available for investment in financial assets are channeled through financial intermediaries. Discuss the role of financial intermediaries in real estate finance and give their classification (6 Marks)
- c) For some years now the real estate industry in Kenya has been growing in leaps and bounds. One of the biggest challenges that have to be overcome by most developers and investors in this industry is 'how to Finance their real estate projects'. Discuss ways and places one can explore while planning to get funding for a real estate project (6 Marks).

(TOTAL= 15 MARKS)

### QUESTION FIVE

Explain the following terms; Interest, Value and Easements as used to in real estate finance (3 Marks). ✓

In real estate, investment analysis helps in answering questions relating to an investment. Discuss the various ways of evaluating real estates (6 Marks). ✓

Property appraisal is intended to ensure that the market value of the property used as security is sufficiently high to pay the loan balance in the event of default. Appraisal involves assessment of? Discuss (6 Marks). ✓

(TOTAL= 15 MARKS)