Real Estate Finance and Investments
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MIDTERM EXAM

1) The debt in connection with a real property financing is evidenced by:
   a) A mortgage
   b) A deed of trust
   c) A security interest
   d) A promissory note

2) A mobile home purchased from an RV dealership is:
   a) Personal property
   b) Real property
   c) Can be either real property or personal property depending on the circumstances
   d) Cannot be financed with a mortgage

3) All of the following are types of depreciation that reduce the value of real property except:
   a) Physical deterioration
   b) Tax depreciation → actually helps value
   c) Functional obsolescence → function of house no longer desirable
   d) Economic obsolescence → ex: power plant built next to house; you had no control

4) An adjustable rate mortgage with a start rate of 3.5%, an index of the 11th District COFI, a margin of 1.5%, and periodic and lifetime caps of 1/5 with semi-annual adjustments, would have a maximum interest rate of what at the end of the fourth loan year if 11th District COFI is 7.5% at that time?
   a) 8.5%
   b) 9.0%
   c) 10.5%
   d) 11.0%

3.5 5.5 7.5 8.5...

1 2 3 4

increment ← 1/5 → cap 8.5

1.5 + 7.5 = 9 > 8.5 so 8.5%

5) An investor is considering a commercial property acquisition at a price of $4,000,000 with the following annualized financial information:

Gross rental and other income …………$ 450,000
Operating Expenses ……………………$ 150,000
Annual Tax Depreciation ………………$ 120,000
Assumable interest-only mortgage …….$3,000,000 at 6% per year

What is the acquisition cap. rate?
   a) 11.25%
   b) 7.5%
   c) 4.5%
   d) 3.0%

$$\frac{450{,}000 - 150{,}000}{4{,}000{,}000} = 0.075 \qquad \frac{\text{Net Operating Income}}{\text{Prop. Asset Value}}$$

6) Referring to the prior question, what is the property's taxable income?
   a) $300,000
   b) $180,000
   c) $120,000
   d) $0

NOI − interest − tax depreciation

(450,000 − 150,000) − (.06 × 3,000,000) − 120,000 = 0 something easily turned into cash

7) If a real estate investor who needs liquidity is concerned that the current all-time low levels of long term interest rates may not last and are far more likely to rise significantly in the future, she should:
   a) Borrow with ARMs → adj. rate mort. : if high rate initially but might get lower
   b) Borrow with short term fixed rate non-recourse mortgages
   c) Borrow with long term fixed rate non-recourse mortgages → want long term since it's currently low rate
   d) Borrow with six month LIBOR based floating rate mortgages

8) Equity can build up in a property by:
   a) Price appreciation and positive loan amortization
   b) Price appreciation and negative loan amortization
   c) Price depreciation and positive loan amortization
   d) Price depreciation and negative loan amortization

appreciation: increase in value
amortization: paying off loan in set time period
equity: amt you paid off plus amt you bought for

9) What is the APR on a 30 year fully amortized fixed rate loan in the amount of \$300,000 if the stated annual interest rate is 3.5% and the lender charges 1 point as an origination fee, \$180 for a credit report and \$360 for an appraisal?
   a) 3.68%
   b) 3.60%
   c) 3.50%
   d) 3.42%

$i = \frac{3.5\%}{12}$ $n = 30 \cdot 12$ PV = 300k

① PMT/12 = -1347.13

② Fee = 1% × 300k + 180 + 360 = 3540

③ 300k - 3540 = 296460

④ n = 30·12 PV = 296460 PMT = 1347.13

FV = 0 i = ? × 12 = 3.60

10) A loan with negative amortization always leads to:
   a) Foreclosure
   b) Lower monthly payments
   c) A higher principal balance
   d) Lower interest payments

11) A lender who fails to timely record a mortgage in connection with a loan is in danger of:
   a) Losing its right to sue on the loan in the event of a default by the borrower
   b) Losing the priority of its lien as against subsequent lenders to that borrower → paying back in order you borrowed from
   c) Losing the ability to collect amounts due under the note
   d) Federal Reserve sanctions for failure to timely record the mortgage

12) If the loan to value ratio is 75%, the stated annual interest rate is 5%, the loan term is 15 years fully amortized, and the down payment is \$250,000, what is the purchase price of the property?
   a) \$750,000
   b) \$800,000
   c) \$1,000,000
   d) \$1,250,000

$\text{ratio} = \frac{\text{loan}}{\text{value}} = .75$ loan = .75V

Value = 250k + loan value = 250,000 + .75V V = 1,000,000

13) Referring to the prior question, what is the monthly payment on the loan?
   a) \$5,930.95
   b) \$6,326.35
   c) \$7,907.93
   d) \$9,884.92

n = 15×12 $i = \frac{5\%}{12}$ PV = 750,000 PMT = answer

14) When compared to a 30 year fully amortized fixed rate mortgage, a 15 year fully amortized fixed rate mortgage of the same loan amount generally does all of the following except:
   a) Allows the borrower to pay a lower interest rate
   b) Allows the borrower to pay less total interest over the life of the loan
   c) Allows the borrower to pay lower monthly payments
   d) Allows the borrower to build equity faster

15) If a lender wants to achieve an APR of 10 ½ % on a 30 year fixed rate loan for $350,000 with a stated annual interest rate of 10 ¼ % and no other fees or costs to the borrower, how many points should the lender charge the borrower? n = 30   i = 10.25%   PV = 350k   FV = 0   PMT = ? = (monthly) ⇒ 3158.68
   a) ½
   b) 1
   c) 1 ½
   d) 2

Find new PV with PMT & i = 10.50
PV = 342935.68
Fee = 350K − 342935.68 = 7064.32

$\frac{7064.32}{350000} = .02 = 2\%$

Ch. 12

16) Positive financial leverage occurs when:
   a) An investor borrows interest-only and thereby avoids amortization payments
   b) An investor borrows at higher loan to value ratios
   c) An investor borrows non-recourse
   d) An investor borrows at an interest rate below the property's unleveraged IRR

17) The market rent for a commercial property is affected by all of the following except:
   a) The national and local economic outlook
   b) The supply of available comparable space
   c) The terms and conditions for outstanding debt on the property
   d) The demand for available comparable space

18) The capitalization rate for a commercial property at the time of acquisition:
   a) Must exceed the stated interest rate on outstanding debt for there to be positive cash flow
   b) Is equal to the property's net operating income divided by the purchase price
   c) Will lead to negative cash flow if it is less than the debt service constant
   d) Is equal to the property's purchase price divided by the before tax cash flow

$\frac{\text{NOI}}{\text{valu}}$

Ch. 10

19) If long term interest rates rise, capitalization rates for commercial properties will likely:
   a) Fall
   b) Rise
   c) Stay the same
   d) Invert

20) Any loan amount still unpaid after a judicial foreclosure might become a deficiency judgment:
   a) Against the borrower if the loan is non-recourse
   b) Against the lender if the loan is non-recourse
   c) Against the borrower if the loan is recourse
   d) Against the lender if the loan is recourse

recourse: can go after personal property to help pay back

21) How much should an investor pay for a property that is expected to generate annual triple net operating income of $250,000 for ten years with a sale value at the end of the tenth year of $4 million to achieve a 12% unleveraged compounded annual rate of return?
   a) $1.3 million
   b) $1.8 million
   c) $2.7 million
   d) $4.0 million

n = 10   i = 12%   FV = $4 mil
PMT = 250,000   PV = ?

22) Referring to the prior question, if the investor borrows 80% of the purchase price at 6% interest-only for ten years, what will be the investor's leveraged compounded before tax annual rate of return?
   a) 18.0%
   b) 28.4%
   c) 34.4%
   d) 51.5%

$\frac{\text{debt}}{\text{value}} = \text{leverage}$

23) When reviewing an application for a real estate construction loan, a lender is most interested in:
   a) The location of the property
   b) The expected income to be generated from the property
   c) The sales prices for comparable properties
   d) The ability of the borrower to repay the loan

24) If a commercial property's first year annual net operating income is projected to be $180,000, the property's acquisition cap. rate is 8.0%, and the lender's maximum LTV is 80% of the purchase price, what is the maximum loan amount?
   a) $1,800,000
   b) $2,000,000
   c) $2,250,000
   d) $2,812,500

Loan to Value $\quad 80\% = \frac{\text{loan}}{2250000}$

$\text{cap} = 8\% = \frac{\text{NOI}}{\text{Value}} = \frac{180000}{\text{value}} \quad \text{value} = 2250000 \quad \text{loan} = 1.8\text{ mil}$

25) Referring to the prior question, if the lender requires an initial debt service coverage ratio of 1.2 and an annual interest rate of 7.5% on a 30 year fully amortized loan payable monthly, what is the maximum loan amount that can be borrowed against the property?
   a) $1,787,720
   b) $2,157,420
   c) $2,373,163
   d) $2,574,317

$n = 30 \times 12 \quad i = 7.5/12$

$\frac{\text{NOI}}{\text{mortgage payment}} = 1.2 \quad \text{PMT} = \frac{\text{NOI}}{1.2} = \left(\frac{180k}{1.2}\right)/12 \text{ months}$

$FV = 0 \quad PV = ?$

26) The most common reason for a default by a borrower under a real property loan agreement is:
   a) Failure to pay insurance and taxes when due
   b) Failure to pay interest and principal when due
   c) Failure to pay points and closing costs when due (Ch3)
   d) Failure to pay servicing fees when due

Ch 2

27) California lenders generally document their real property loans with:
   a) A note and deed of trust
   b) A note and mortgage
   c) A contract for deed
   d) A land contract

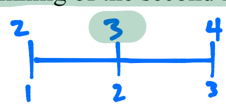
28) Lenders prefer a deed of trust over a mortgage because:
   a) Fewer parties are involved
   b) Closing is easier
   c) Foreclosure is easier
   d) Interest rates are higher

29) All of the following are used as ARM indices except:
   a) 11th District COFI
   b) One year treasuries
   c) Federal funds rate
   d) Six month LIBOR

30) A fully amortized mortgage where a borrower pays a fixed amount each month that the loan is outstanding is a:
   a) Constant amortization mortgage
   b) Negative amortization mortgage
   c) Constant payment mortgage
   d) Graduated payment mortgage

31) Refinancing a property with a larger loan at the same interest rate is advisable for all of the following reasons except:
  a) To obtain cash without paying tax on the additional loan amount
  b) To release part of a property's equity without having to sell the property
  c) To increase financial leverage and increase the return on equity
  d) To decrease the risk of a loan default that might lead to foreclosure

32) An adjustable rate mortgage with a start rate of 2.0% for one year, an index of one year LIBOR, a margin of 2.0%, and periodic and lifetime caps of 1/6 with annual adjustments, would have an interest rate of what at the beginning of the second loan year if the one year LIBOR rate is 4.0% at that time?
  a) 3.0%
  b) 4.0%
  c) 5.0%
  d) 6.0%



LIBOR+margin = 4+2 =6
3<6

33) If you borrow at a rate lower than a property's unleveraged IRR, the leveraged return will be:
  a) Lower than the unleveraged IRR
  b) Higher than the unleveraged IRR
  c) The same as the unleveraged IRR
  d) Depends on the unleveraged IRR

34) If you borrow at a rate lower than a property's unleveraged IRR, the leveraged return will:
  a) Increase as the LTV ratio is increased
  b) Decrease as the LTV ratio is increased
  c) Increase as the LTV ratio is decreased
  d) Depends on the unleveraged IRR

35) A simple method to appraise the value of an apartment building is:
  a) The cost approach
  b) Discounted cash flow
  c) Gross rent multiplier
  d) Comparable sales

36) If a 30 year fixed rate loan from lender A has a stated APR of 3.5% and a 15 year fixed rate loan for the same amount from lender B has a stated APR of 3.25%, a borrower should:
  a) Always choose the loan from lender A
  b) Always choose the loan from lender B
  c) Always choose an ARM loan instead
  d) Make a closer analysis of all of the terms and conditions of the two loans to determine which loan is better for that borrower, or if another loan or lender should be considered

37) Lenders require that the appraised value of a property:
  a) Equals the amount of the proposed loan
  b) Exceeds the amount of the proposed loan
  c) Is less than the amount of the proposed loan
  d) Is certified and notarized

38) The interest rate on a junior mortgage should normally be:
  a) The same as the rate on the underlying first mortgage
  b) Higher than the rate on the underlying first mortgage
  c) Lower than the rate on the underlying first mortgage
  d) Tied to the rate on the underlying first mortgage

jr mort = 2nd mortgage

39) When the early payments on an adjustable rate mortgage are scheduled at less than the fully indexed amounts, the possibility exists for:
   a) Negative leverage
   b) Negative hypothecation
   c) Negative amortization
   d) Negative credit report

40) If an investor is choosing between two potential investments, one with an expected leveraged IRR of 36% and the other with an expected leveraged IRR of 18%, the investor should choose:
   a) The investment with the higher expected return because it will generate more profit
   b) The investment with the lower expected return because it must be safer
   c) Neither investment because the returns seem too good to be true in today's market
   d) The risks of each investment must be carefully weighed against the expected returns during the due diligence process to determine whether either investment should be chosen

41) If a senior homeowner wants to put a reverse annuity mortgage (RAM) on her property that currently appraises for $750,000 so that she will receive a monthly payment from the lender of $1,800 for the rest of her life, and if her lender's RAM program charges 6.5% annual interest compounded monthly, what will be the loan balance when the borrower dies after 22 years if the loan is not capped at the current appraised value?

   n=22 i=6.5 PV=0 PMT=1800 per month

   Find FV

   a) $252,476
   b) $750,000
   c) $1,050,958
   d) $2,070,995

42) If a borrower wants to buy down the rate on a $500,000 fixed rate fully amortized 30 year loan with a 4.5% annual interest rate by paying additional points at closing to reduce the rate by half a percent, and if the lender charges one point for each 0.2% of rate buy down, the additional cost of the rate buy down at loan closing will be:

   ↓2.5 pts

   .025 x 500K = 12500

   a) $1,000
   b) $2,500
   c) $5,000
   d) $12,500

43) When a lease requires a tenant to pay more rent when the tenant's sales volume increases over a certain amount, the additional rent paid is:
   a) Triple net rent
   b) Percentage rent
   c) Pass through rent
   d) CPI rent

44) A commercial property owner can increase net operating income by:
   a) Reducing CPI adjustments in leases
   b) Reducing percentage rent provisions
   c) Reducing debt service
   d) Reducing operating expenses

45) The parties to a deed of trust include all of the following except:
   a) Trustor
   b) Trustee
   c) Benefactor
   d) Beneficiary

46) What is the APR on a \$500,000 fixed rate loan amortized over 30 years but due in 10 years if the stated annual interest rate is 5.0% and the lender charges 2% as an origination fee, \$18 for a credit report and \$500 for an appraisal?
a) 4.74%
b) 5.00%
c) 5.19%
d) 5.29%

i = 5% n = 30
Fee = 2% x 500k = 10k
Fee = 10k + 18 + 500 = 10518
500,000 - 10518 = 489482
PMT = 32525.72 using 500k as PV
n = 30x12 PV = 489482 FV = 0 PMT = 32525.72/12
i x12 =

47) What is the debt service coverage ratio for a \$1.8 million property generating a 6.5% before tax annual return on equity with a \$1.5 million ten year interest-only first mortgage at a 5.5% annual interest rate?
a) 1.42
b) 1.24
c) 0.83
d) 0.71

$\frac{\text{NOI}}{\text{mortgage}}$

48) A borrower has saved \$50,000 to invest in a \$500,000 home. She can obtain either a \$450,000 fully amortized 30 year mortgage at 5.75% from Lender A, or a \$400,000 fully amortized 30 year first mortgage at 5.25% with a \$50,000 fully amortized 30 year second mortgage at 9.0% from Lender B. What is the effective cost of the loan package from Lender B?
a) 7.55%
b) 6.15%
c) 5.70%
d) 5.51%

A
i = 9/12 PV = 50K
n = 30x12
PMT = ? = 402.31

B
i = 5.25/12 PV = 400k
n = 30x12
PMT_B = -2208.81

New
PMT = 402.31 + 2208.81
PV = 50K + 400k = 450k
i = ? = 5.70%

49) Referring to the prior question, is the single \$450,000 loan from Lender A preferred or the combined \$400,000 first and \$50,000 second from Lender B?
a) Single loan from Lender A
b) Loan package from Lender B
c) No difference
d) Depends on all of the terms and conditions from Lender A as compared to those from Lender B

50) A borrower can obtain an 80% fully amortized loan at a 6.0% annual interest rate with equal monthly payments of principal and interest over 30 years, or obtain a 90% fully amortized loan for 30 years at a 6.5% annual interest rate with equal monthly payments. What is the incremental annual borrowing cost for the additional loan amount if each loan is outstanding for the full term?
a) 12.5%
b) 10.2%
c) 8.3%
d) 6.5%

A
n = 12x30
i = 6/12
PV = 80K
PMT = 479.64

B
i = 6.5/12
PV = 90K
PMT_B = 568.86

diff = 568.86 - 479.64 = 89.22

find i
using PMT = 89.22
& PV = 90K - 80K = 10K
i = 10.2%