TBChap 004 - this is the test bank chap 4 of Corporate Finance class

Corporate Finance (Trường Đại học Kinh tế Thành phố Hồ Chí Minh)

Multiple Choice Questions

1. An annuity stream of cash flow payments is a set of:

   A. level cash flows occurring each time period for a fixed length of time.

   B. level cash flows occurring each time period forever.

   C. increasing cash flows occurring each time period for a fixed length of time.

   D. increasing cash flows occurring each time period forever.

   E. arbitrary cash flows occurring each time period for no more than 10 years.

2. Annuities where the payments occur at the end of each time period are called _____, whereas _____ refer to annuity streams with payments occurring at the beginning of each time period.

   A. ordinary annuities; early annuities

   B. late annuities; straight annuities

   C. straight annuities; late annuities

   D. annuities due; ordinary annuities

   E. ordinary annuities; annuities due

3. An annuity stream where the payments occur forever is called a(n):

   A. annuity due.

   B. indemnity.

   C. perpetuity.

   D. amortized cash flow stream.

   E. amortization table.

4. The interest rate expressed in terms of the interest payment made each period is called the _____ rate.

A. stated annual interest

B. compound annual interest

C. effective annual interest

D. periodic interest

E. daily interest

5. The interest rate expressed as if it were compounded once per year is called the _____ rate.

A. stated interest

B. compound interest

C. effective annual

D. periodic interest

E. daily interest

6. The interest rate charged per period multiplied by the number of periods per year is called the _____ rate.

A. effective annual

B. annual percentage

C. periodic interest

D. compound interest

E. daily interest

7. Paying off long-term debt by making installment payments is called:

A. foreclosing on the debt.

B. amortizing the debt.

C. funding the debt.

D. calling the debt.

E. None of these.

8. You are comparing two annuities which offer monthly payments for ten years. Both annuities are identical with the exception of the payment dates. Annuity A pays on the first of each month while annuity B pays on the last day of each month. Which one of the following statements is correct concerning these two annuities?

A. Both annuities are of equal value today.

B. Annuity B is an annuity due.

C. Annuity A has a higher future value than annuity B.

D. Annuity B has a higher present value than annuity A.

E. Both annuities have the same future value as of ten years from today.

9. You are comparing two investment options. The cost to invest in either option is the same today. Both options will provide you with $20,000 of income. Option A pays five annual payments starting with $8,000 the first year followed by four annual payments of $3,000 each. Option B pays five annual payments of $4,000 each. Which one of the following statements is correct given these two investment options?

A. Both options are of equal value given that they both provide $20,000 of income.

B. Option A is the better choice of the two given any positive rate of return.

C. Option B has a higher present value than option A given a positive rate of return.

D. Option B has a lower future value at year 5 than option A given a zero rate of return.

E. Option A is preferable because it is an annuity due.

10. You are considering two projects with the following cash flows:

	Project A	Project B
Year 1	$2,500	$4,000
Year 2	3,000	3,500
Year 3	3,500	3,000
Year 4	4,000	2,500

Which of the following statements are true concerning these two projects?

I. Both projects have the same future value at the end of year 4, given a positive rate of return.
II. Both projects have the same future value given a zero rate of return.
III. Both projects have the same future value at any point in time, given a positive rate of return.
IV. Project A has a higher future value than project B, given a positive rate of return.

A. II only

B. IV only

C. I and III only

D. II and IV only

E. I, II, and III only

11. A perpetuity differs from an annuity because:

A. perpetuity payments vary with the rate of inflation.

B. perpetuity payments vary with the market rate of interest.

C. perpetuity payments are variable while annuity payments are constant.

D. perpetuity payments never cease.

E. annuity payments never cease.

12. Which one of the following statements concerning the annual percentage rate is correct?

A. The annual percentage rate considers interest on interest.

B. The rate of interest you actually pay on a loan is called the annual percentage rate.

C. The effective annual rate is lower than the annual percentage rate when an interest rate is compounded quarterly.

D. When firms advertise the annual percentage rate they are violating U.S. truth-in-lending laws.

E. The annual percentage rate equals the effective annual rate when the rate on an account is designated as simple interest.

13. Which one of the following statements concerning interest rates is correct?

A. The stated rate is the same as the effective annual rate.

B. An effective annual rate is the rate that applies if interest were charged annually.

C. The annual percentage rate increases as the number of compounding periods per year increases.

D. Banks prefer more frequent compounding on their savings accounts.

E. For any positive rate of interest, the effective annual rate will always exceed the annual percentage rate.

14. Which of the following statements concerning the effective annual rate are correct?

I. When making financial decisions, you should compare effective annual rates rather than annual percentage rates.
II. The more frequently interest is compounded, the higher the effective annual rate.
III. A quoted rate of 6% compounded continuously has a higher effective annual rate than if the rate were compounded daily.
IV. When borrowing and choosing which loan to accept, you should select the offer with the highest effective annual rate.

A. I and II only

B. I and IV only

C. I, II, and III only

D. II, III, and IV only

E. I, II, III, and IV

15. The highest effective annual rate that can be derived from an annual percentage rate of 9% is computed as:

A. .09e - 1.

B. e.09 × q.

C. e × (1 + .09).

D. e.09 - 1.

E. (1 + .09)q.

16. The time value of money concept can be defined as:

A. the relationship between the supply and demand of money.

B. the relationship between money spent versus money received.

C. the relationship between a dollar to be received in the future and a dollar today.

D. the relationship between interest rate stated and amount paid.

E. None of these.

17. Discounting cash flows involves:

A. discounting only those cash flows that occur at least 10 years in the future.

B. estimating only the cash flows that occur in the first 4 years of a project.

C. multiplying expected future cash flows by the cost of capital.

D. discounting all expected future cash flows to reflect the time value of money.

E. taking the cash discount offered on trade merchandise.

18. Compound interest:

A. allows for the reinvestment of interest payments.

B. does not allow for the reinvestment of interest payments.

C. is the same as simple interest.

D. provides a value that is less than simple interest.

E. Both allows for the reinvestment of interest payments and provides a value that is less than simple interest.

19. An annuity:

A. is a debt instrument that pays no interest.

B. is a stream of payments that varies with current market interest rates.

C. is a level stream of equal payments through time.

D. has no value.

E. None of these.

20. The stated rate of interest is 10%. Which form of compounding will give the highest effective rate of interest?

A. annual compounding

B. monthly compounding

C. daily compounding

D. continuous compounding

E. It is impossible to tell without knowing the term of the loan.

21. The present value of future cash flows minus initial cost is called:

A. the future value of the project.

B. the net present value of the project.

C. the equivalent sum of the investment.

D. the initial investment risk equivalent value.

E. None of these.

22. Find the present value of $5,325 to be received in one period if the rate is 6.5%.

A. $5,000.00

B. $5,023.58

C. $5,644.50

D. $5,671.13

E. None of these.

23. If you have a choice to earn simple interest on $10,000 for three years at 8% or annually compounded interest at 7.5% for three years which one will pay more and by how much?

A. Simple interest by $50.00

B. Compound interest by $22.97

C. Compound interest by $150.75

D. Compound interest by $150.00

E. None of these.

Simple Interest = $10,000 (.08)(3) = $2,400;
Compound Interest = $10,000((1.075)^3 - 1) = $2,422.97;
Difference = $2,422.97 - $2,400 = $22.97

24. Bradley Snapp has deposited $6,000 in a guaranteed investment account with a promised rate of 6% compounded annually. He plans to leave it there for 4 full years when he will make a down payment on a car after graduation. How much of a down payment will he be able to make?

A. $2,397.00

B. $3,288.00

C. $6,321.32

D. $7,574.86

$6,000 (1.06)^4 = $7,574.86

E. $8,857.59

25. Your parents are giving you $100 a month for four years while you are in college. At a 6% discount rate, what are these payments worth to you when you first start college?

A. $3,797.40

B. $4,167.09

C. $4,198.79

D. $4,258.03

E. $4,279.32

$$P = PMT \times \frac{1 - \frac{1}{(1+r)^n}}{r}$$

PMT is $100

26. You just won the lottery! As your prize you will receive $1,200 a month for 100 months. If you can earn 8% on your money, what is this prize worth to you today?

A. $87,003.69

B. $87,380.23

C. $87,962.77

PV = $1,200({1 - 1/[1 + (.08/12)]100}/(.08/12)) = $87,962.77

D. $88,104.26

E. $90,723.76

27. Todd is able to pay $160 a month for five years for a car. If the interest rate is 4.9%, how much can Todd afford to borrow to buy a car?

A. $6,961.36

B. $8,499.13

C. $8,533.84

D. $8,686.82

E. $9,588.05

28. You are the beneficiary of a life insurance policy. The insurance company informs you that you have two options for receiving the insurance proceeds. You can receive a lump sum of $50,000 today or receive payments of $641 a month for ten years. You can earn 6.5% on your money. Which option should you take and why?

A. You should accept the payments because they are worth $56,451.91 today.

B. You should accept the payments because they are worth $56,523.74 today.

C. You should accept the payments because they are worth $56,737.08 today.

D. You should accept the $50,000 because the payments are only worth $47,757.69 today.

E. You should accept the $50,000 because the payments are only worth $47,808.17 today.

29. Your employer contributes $25 a week to your retirement plan. Assume that you work for your employer for another twenty years and that the applicable discount rate is 5%. Given these assumptions, what is this employee benefit worth to you today?

A. $13,144.43

B. $15,920.55

C. $16,430.54

D. $16,446.34

E. $16,519.02

30. You have a sub-contracting job with a local manufacturing firm. Your agreement calls for annual payments of $50,000 for the next five years. At a discount rate of 12%, what is this job worth to you today?

A. $180,238.81

B. $201,867.47

C. $210,618.19

D. $223,162.58

E. $224,267.10

31. The Ajax Co. just decided to save $1,500 a month for the next five years as a safety net for recessionary periods. The money will be set aside in a separate savings account which pays 3.25% interest compounded monthly. It deposits the first $1,500 today. If the company had wanted to deposit an equivalent lump sum today, how much would it have had to deposit?

A. $82,964.59

B. $83,189.29

C. $83,428.87

D. $83,687.23

E. $84,998.01

32. You need some money today and the only friend you have that has any is your ‘miserly' friend. He agrees to loan you the money you need, if you make payments of $20 a month for the next six months. In keeping with his reputation, he requires that the first payment be paid today. He also charges you 1.5% interest per month. How much money are you borrowing?

A. $113.94

B. $115.65

C. $119.34

D. $119.63

E. $119.96

33. You buy an annuity which will pay you $12,000 a year for ten years. The payments are paid on the first day of each year. What is the value of this annuity today at a 7% discount rate?

A. $84,282.98

B. $87,138.04

C. $90,182.79

D. $96,191.91

E. $116,916.21

34. You are scheduled to receive annual payments of $10,000 for each of the next 25 years. Your discount rate is 8.5%. What is the difference in the present value if you receive these payments at the beginning of each year rather than at the end of each year?

A. $8,699

B. $9,217

C. $9,706

D. $10,000

E. $10,850

35. You are comparing two annuities with equal present values. The applicable discount rate is 7.5%. One annuity pays $5,000 on the first day of each year for twenty years. How much does the second annuity pay each year for twenty years if it pays at the end of each year?

A. $4,651

B. $5,075

C. $5,000

D. $5,375 Payment = $5,000 × 1.075 = $5,375

E. $5,405

36. Martha receives $100 on the first of each month. Stewart receives $100 on the last day of each month. Both Martha and Stewart will receive payments for five years. At an 8% discount rate, what is the difference in the present value of these two sets of payments?

A. $32.88

B. $40.00

C. $99.01

D. $108.00

E. $112.50

37. What is the future value of $1,000 a year for five years at a 6% rate of interest?

A. $4,212.36

B. $5,075.69

C. $5,637.09

D. $6,001.38

E. $6,801.91

38. What is the future value of $2,400 a year for three years at an 8% rate of interest?

A. $6,185.03

B. $6,847.26

C. $7,134.16

D. $7,791.36

E. $8,414.67

39. Janet plans on saving $3,000 a year and expects to earn 8.5%. How much will Janet have at the end of twenty-five years if she earns what she expects?

A. $219,317.82

B. $230,702.57

C. $236,003.38

D. $244,868.92

E. $256,063.66

40. Toni adds $3,000 to her savings on the first day of each year. Tim adds $3,000 to his savings on the last day of each year. They both earn a 9% rate of return. What is the difference in their savings account balances at the end of thirty years?

A. $35,822.73

B. $36,803.03

C. $38,911.21

D. $39,803.04

E. $40,115.31

FVA = 3,000 x (1 + 0.09)30 - 1
= 408,922.62
FVA = 3,000 x (1 + 0.09)30 - 1 x (1 + 0.09)
= 445,725.65

445,725.65 - 408,922.62 = 36,803.03

41. You borrow $5,600 to buy a car. The terms of the loan call for monthly payments for four years at a 5.9% rate of interest. What is the amount of each payment?

A. $103.22

B. $103.73

C. $130.62

D. $131.26

E. $133.04

42. You borrow $149,000 to buy a house. The mortgage rate is 7.5% and the loan period is 30 years. Payments are made monthly. If you pay for the house according to the loan agreement, how much total interest will you pay?

A. $138,086

B. $218,161

C. $226,059

D. $287,086

E. $375,059

PV = 149,000, I = 7.5%/12 = 0.625, N = 30 X 12 = 360, FV = 0. Solve for PMT = 1,041.83.
Therefore, the total payment = 1,041.83 X 360 = 375,058.66.
Total Interest = Total PMT - Principal = 375,058.66 - 149,000 = 226,058.66.

43. The Great Giant Corp. has a management contract with its newly hired president. The contract requires a lump sum payment of $25 million be paid to the president upon the completion of her first ten years of service. The company wants to set aside an equal amount of funds each year to cover this anticipated cash outflow. The company can earn 6.5% on these funds. How much must the company set aside each year for this purpose?

A. $1,775,042.93

B. $1,798,346.17

C. $1,801,033.67

D. $1,852,617.25

E. $1,938,018.22

AFV = $25,000,000 = C × [(1.089 -1) / 0.65]
C = $

44. You retire at age 60 and expect to live another 27 years. On the day you retire, you have $464,900 in your retirement savings account. You are conservative and expect to earn 4.5% on your money during your retirement. How much can you withdraw from your retirement savings each month if you plan to die on the day you spend your last penny?

A. $2,001.96

B. $2,092.05

C. $2,398.17

D. $2,472.00

E. $2,481.27

45. The McDonald Group purchased a piece of property for $1.2 million. It paid a down payment of 20% in cash and financed the balance. The loan terms require monthly payments for 15 years at an annual percentage rate of 7.75% compounded monthly. What is the amount of each mortgage payment?

A. $7,440.01

B. $8,978.26

C. $9,036.25

D. $9,399.18

E. $9,413.67

46. You estimate that you will have $24,500 in student loans by the time you graduate. The interest rate is 6.5%. If you want to have this debt paid in full within five years, how much must you pay each month?

A. $471.30

B. $473.65

C. $476.79

D. $479.37

E. $480.40

47. You are buying a previously owned car today at a price of $6,890. You are paying $500 down in cash and financing the balance for 36 months at 7.9%. What is the amount of each loan payment?

A. $198.64

B. $199.94

C. $202.02

D. $214.78

E. $215.09

48. The Good Life Insurance Co. wants to sell you an annuity which will pay you $500 per quarter for 25 years. You want to earn a minimum rate of return of 5.5%. What is the most you are willing to pay as a lump sum today to buy this annuity?

A. $26,988.16

B. $27,082.94

C. $27,455.33

D. $28,450.67

E. $28,806.30

49. Your car dealer is willing to lease you a new car for $299 a month for 60 months. Payments are due on the first day of each month starting with the day you sign the lease contract. If your cost of money is 4.9%, what is the current value of the lease?

A. $15,882.75

B. $15,906.14

C. $15,947.61

D. $16,235.42

E. $16,289.54

70. You are considering a project with the following cash flows:

Year 1	Year 2	Year 3
$5,600	$9,000	$2,000

What is the present value of these cash flows, given an 11% discount rate?

A. $8,695.61

B. $8,700.89

C. $13,732.41

D. $13,812.03

E. $19,928.16

71. You are considering a project with the following cash flows:

Year 1	Year 2	Year 3
$4,200	$5,000	$5,400

What is the present value of these cash flows, given a 3% discount rate?

A. $13,732.41

B. $13,812.03

C. $14,308.08

D. $14,941.76

E. $14,987.69

72. You have some property for sale and have received two offers. The first offer is for $189,000 today in cash. The second offer is the payment of $100,000 today and an additional $100,000 two years from today. If the applicable discount rate is 8.75%, which offer should you accept and why?

A. You should accept the $189,000 today because it has the higher net present value.

B. You should accept the $189,000 today because it has the lower future value.

C. You should accept the second offer because you will receive $200,000 total.

D. You should accept the second offer because you will receive an extra $11,000.

E. You should accept the second offer because it has a present value of $194,555.42.

73. Your local travel agent is advertising an extravagant global vacation. The package deal requires that you pay $5,000 today, $15,000 one year from today, and a final payment of $25,000 on the day you leave two years from today. What is the cost of this vacation in today's dollars if the discount rate is 6%?

A. $39,057.41

B. $41,400.85

C. $43,082.39

D. $44,414.14

E. $46,518.00

74. One year ago, the Jenkins Family Fun Center deposited $3,600 in an investment account for the purpose of buying new equipment four years from today. Today, it is adding another $5,000 to this account. It plans on making a final deposit of $7,500 to the account next year. How much will be available when it is ready to buy the equipment, assuming it earns a 7% rate of return?

A. $18,159.65

B. $19,430.84

C. $19,683.25

D. $20,194.54

E. $20,790.99

75. What is the future value of the following cash flows at the end of year 3 if the interest rate is 6%? The cash flows occur at the end of each year.

Year 1	Year 2	Year 3
$5,180	$9,600	$2,250

A. $15,916.78

B. $18,109.08

C. $18,246.25 5,180 * 1.06^2 + 9,600 * 1.06 + 2,250 = 18,246.25

D. $19,341.02

E. $19,608.07

76. What is the future value of the following cash flows at the end of year 3 if the interest rate is 9%? The cash flows occur at the end of each year.

Year 1	Year 2	Year 3
$9,820	$0	$4,510

A. $15,213.80

B. $15,619.70

C. $15,916.78

D. $16,177.14 9,820 * 1.09^2 + 0 * 1.09 + 4,510 = 16,177.14

E. $17,633.08

77. What is the future value of the following cash flows at the end of year 3 if the interest rate is 7.25%? The cash flows occur at the end of each year.

Year 1	Year 2	Year 3
$6,800	$2,100	$0

A. $8,758.04

B. $8,806.39

C. $10,073.99 6,800 * 1.0725^2 + 2,100 * 1.0725 + 0 = 10,07399

D. $10,314.00

E. $10,804.36

78. Suzette is going to receive $10,000 today as the result of an insurance settlement. In addition, she will receive $15,000 one year from today and $25,000 two years from today. She plans on saving all of this money and investing it for her retirement. If Suzette can earn an average of 11% on her investments, how much will she have in her account if she retires 25 years from today?

A. $536,124.93

B. $541,414.14

C. $546,072.91

D. $570,008.77

E. $595,098.67

79. The Bluebird Company has a $10,000 liability it must pay three years from today. The company is opening a savings account so that the entire amount will be available when this debt needs to be paid. The plan is to make an initial deposit today and then deposit an additional $2,500 a year for the next three years, starting one year from today. The account pays a 3% rate of return. How much does the Bluebird Company need to deposit today?

A. $1,867.74

B. $2,079.89

C. $3,108.09

D. $4,276.34

E. $4,642.28

N = 3
I/Y = 3
PV = 0
PMT = 2,500
FV = ?
FV = 7,727.25
The payments amount to 7,725.25 of the 10,000 needed in three years the remaining 2,272.75 (10,000 - 7,725.25) must come from the initial deposit.
N = 3
I/Y = 3
PV = ?
PMT = 0
FV = 2,272.75

PV = 2,079.89

80. The government has imposed a fine on the Not-So-Legal Company. The fine calls for annual payments of $100,000, $250,000, and $250,000, respectively over the next three years. The first payment is due one year from today. The government plans to invest the funds until the final payment is collected and then donate the entire amount, including investment earnings, to a national health center. The government will earn 3.5% on the funds held. How much will the national health center receive three years from today?

A. $613,590.00

B. $614,622.50

C. $615,872.50

D. $616,006.00

E. $619,050.05

81. George Jefferson established a trust fund that provides $150,000 in scholarships each year for worthy students. The trust fund earns a 4.25% rate of return. How much money did Mr. Jefferson contribute to the fund assuming that only the interest income is distributed?

A. $3,291,613.13

B. $3,529,411.77

C. $3,750,000.00

D. $4,328,970.44

E. $6,375,000.00

82. A 9% preferred stock pays an annual dividend of $4.50. What is one share of this stock worth today?

A. $0.41

B. $4.50

C. $5.00

D. $45.00

E. $50.00

83. You would like to establish a trust fund that will provide $50,000 a year forever for your heirs. The trust fund is going to be invested very conservatively so the expected rate of return is only 2.75%. How much money must you deposit today to fund this gift for your heirs?

A. $1,333,333.33

B. $1,375,000.00

C. $1,425,000.00

D. $1,666,666.67

E. $1,818,181.82

84. You just paid $350,000 for a policy that will pay you and your heirs $12,000 a year forever. What rate of return are you earning on this policy?

A. 3.25%

B. 3.33%

C. 3.43%

D. 3.50%

E. 3.67%

85. The Eternal Gift Insurance Company is offering you a policy that will pay you and your heirs $10,000 a year forever. The cost of the policy is $285,000. What is the rate of return on this policy?

A. 2.85%

B. 3.25%

C. 3.46%

D. 3.51%

E. 3.64%

86. Your rich uncle establishes a trust in your name and deposits $150,000 in it. The trust pays a guaranteed 4% rate of return. How much will you receive each year if the trust is required to pay you all of the interest earnings on an annual basis?

A. $3,750

B. $4,000

C. $4,500

D. $5,400

E. $6,000

87. The preferred stock of ABC Co. offers an 8.4% rate of return. The stock is currently priced at $50.00 per share. What is the amount of the annual dividend?

A. $2.10

B. $4.20

C. $5.00

D. $6.40

E. $8.60

88. Your credit card company charges you 1.5% per month. What is the annual percentage rate on your account?

A. 12.00%

B. 15.00%

C. 15.39%

D. 18.00%

E. 19.56%

89. What is the annual percentage rate on a loan with a stated rate of 2% per quarter?

A. 2.00%

B. 2.71%

C. 4.04%

D. 8.00%

E. 8.24%

90. You are paying an effective annual rate of 13.8% on your credit card. The interest is compounded monthly. What is the annual percentage rate on your account?

A. 11.50%

B. 12.00%

C. 13.00%

D. 13.80%

E. 14.71%