Clemons Cassie
Exam score: 96

+514/1/30+

FI 302 Fall 2025 Whaley — Exam 2

Important Instruction

1. Write your name in the space provided below and then bubble in your CWID in the grid below (**failure to do so will result in an unprocessed exam and a five percentage point penalty**).
2. Please read each question carefully then bubble in the correct response in the space provided. **I would advise filling in the entire space to ensure a proper reading. Please do not mark any box that you do not wish to answer (this includes "scratching" out answer choices).**
3. There are 31 questions total. Question 1-20 are worth 2 points each, and questions 21-31 are worth 6 points each.
4. You may use a calculator(s) if you wish (a financial calculator is fine).

Name:

Cassie Clemons

☐0	☐0	☐0	■0	☐0	☐0	■0	☐0	← Please enter your CWID in the boxes on the left.
■1	☐1	☐1	☐1	☐1	☐1	☐1	■1	
☐2	■2	■2	☐2	☐2	☐2	☐2	☐2	
☐3	☐3	☐3	☐3	☐3	☐3	☐3	☐3	
☐4	☐4	☐4	☐4	☐4	■4	☐4	☐4	
☐5	☐5	☐5	☐5	☐5	☐5	☐5	☐5	
☐6	☐6	☐6	☐6	■6	☐6	☐6	☐6	
☐7	☐7	☐7	☐7	☐7	☐7	☐7	☐7	
☐8	☐8	☐8	☐8	☐8	☐8	☐8	☐8	
☐9	☐9	☐9	☐9	☐9	☐9	☐9	☐9	

↑ Please write your name in the box above.

You have 75 minutes to complete the exam. When finished, please bring your exam down to the front and present your student ID.

Test questions begin on the next page. Make sure you have/answer 31 questions. Good luck!

The follow questions are problems worth 2 points each.

Question 1 To find the present value of a series of uneven cash flows, you treat each cash flow as a/an _____ and then _____ them together.

- [ ] annuity; add
- [x] finite series; multiply
- [x] ~~lump sum; add~~
- [ ] ~~perpetuity; multiply~~

0/2

Question 2 Which of the following is NOT an example of annuity cash flows?

2. F
- [x] The grocery bill that changes every week
- [ ] The $3.50 you pay every morning for a bagel and coffee as you run to your first morning class
- [ ] The university tuition bill you pay every month that is always the same
- [ ] All of these examples are annuity cash flows.

2/2

√ **Question 3** A stream of equal cash payments lasting forever is termed:

- [x] a perpetuity.
- [ ] an installment plan.
- [ ] an annuity due.
- [ ] an annuity.

2/2

√ **Question 4** A/An _____ is a series of equal beginning-of-the-period cash flows.

- [x] annuity due
- [ ] None of these
- [ ] ordinary annuity
- [ ] perpetuity due

2/2

√ **Question 5** Which one of the following will increase the present value of an annuity, other things equal?

- [ ] Increasing the interest rate
- [ ] Decreasing the number of payments
- [ ] Decreasing the amount of the payment
- [x] Decreasing the interest rate

2/2

√ **Question 6** Which of the following statements is TRUE for the borrower of a loan?

- [ ] By DECREASING the frequency of payments on a loan, you REDUCE your total cash outflow on that loan.
- [ ] By INCREASING the frequency of payments on a loan, you INCREASE your total cash outflow on that loan.
- [x] By INCREASING the frequency of payments on a loan, you REDUCE your total cash outflow on that loan.
- [ ] None of the above are true.

2/2

✓ **Question 7** Which of the following loan structures results in the lowest possibly interest payment to the lender?

- [x] Amortized loan
- [ ] Discount loan
- [ ] Rolling balance loan
- [ ] Interest only loan

2/2

✓ **Question 8** Amortization is effectively turning a loan into a/an:

- [x] annuity
- [ ] series of increasing payments
- [ ] series of decreasing payments
- [ ] lump-sum payment

2/2

✓ **Question 9** Given the future value, which of the following will contribute to a lower present value?

- [ ] Less frequent discounting
- [ ] Lower discount factor
- [ ] Fewer time periods
- [x] Higher discount rate

2/2

✓ **Question 10** Banks often advertise the _____ on loans because it is typically lower than the loan's _____.

- [x] APR; EAR
- [ ] EAR; APY
- [ ] EAR; APR
- [ ] APY; EAR

2/2

✓ **Question 11** A bond's par value can also be called its:

- [ ] market value.
- [x] face value.
- [ ] coupon payment.
- [ ] present value.

2/2

Question 12 Periodic receipts of interest by the bondholder are known as:

- [x] coupon payments.
- [ ] principal payments.
- [ ] the coupon rate.
- [ ] the default premium.

2/2

Question 13 Investors who purchase bonds having lower credit ratings should expect:

- [x] lower coupon payments.
- [x] higher default possibilities.
- [ ] lower yields to maturity.
- [ ] ~~higher purchase prices.~~

0/2

pre ≥
pur c = ytm
dis ≤

✓ **Question 14** The discount rate that makes the present value of a bond's payments equal to its price is termed the:

- [x] yield to maturity.
- [ ] current yield.
- [ ] coupon rate.
- [ ] dividend yield.

0/2

✓ **Question 15** If the federal reserve increases interest rates, we would expect bond prices to _____ and yields to _____.

c < ytm price ↓ ytm

- [ ] fall; fall
- [x] fall; rise
- [ ] ~~rise; fall~~
- [ ] ~~rise; rise~~

2/2

✓ **Question 16** What happens to a discount bond as the time to maturity decreases?

- [ ] The coupon rate increases.
- [ ] The coupon rate decreases.
- [ ] The bond price decreases.
- [x] The bond price increases.

2/2

✓ **Question 17** Which type of bond is certain to provide a capital loss if held to maturity?

- [x] Premium bond
- [ ] Zero-coupon bond
- [ ] Junk bond
- [ ] Discount bond

2/2

Question 18 Which one of the following bonds would be likely to exhibit a greater degree of interest rate risk?

- [ ] ~~A zero-coupon bond with 20 years until maturity~~
- [x] ~~A zero-coupon bond with 30 years until maturity~~
- [ ] A coupon-paying bond with 20 years until maturity
- [ ] ~~A floating-rate bond with 20 years until maturity~~

0/2

Question 19 AS CFO of Costco Wholesale, your treasurer just informed you that the $5 billion, 10-year, semi-annual bond issuance you are about to sell has an expected yield to maturity of 8%. What coupon rate do you set for the bond's indenture?

- [ ] 4%
- [x] 10%
- [ ] 12%
- [x] 8%

0/2

N = 10 × 2

I/Y = 8

P/Y = 2

PV = $ 5 billion

PMT =

FV = 1000

+514/5/26+

✓ **Question 20** What are the conditions imposed on a debt issuer that are designed to protect bondholders?

2/2

- ☐ Collateral agreements
- ☐ Vanilla wrappers
- ☐ Default provisions
- ☒ Protective covenants

The follow questions are problems worth 6 points each.

Question 21 Suppose you buy a home and borrow $148,000 using a 30 year mortgage with an annual interest rate of 3.00% (compounded monthly). You recall your FI 302 professor talking about how increasing your monthly payment can save you both time and money. You decided to pay 10% more each month than what the bank suggests your payment should be. Given this, in how many years will you pay off the loan?

N = 30 x 12 = 360 pmt = -623.973970 -686.371367
I/Y = 3 FV = 0
P/Y = 12
PV = 148,000

- [ ] 29.8
- [ ] 22.5
- [x] 25.9
- [ ] 34.3
- [ ] 39.4

6/6

Question 22 Kim decides early in her career that she wishes to save aggressively for retirement. Kim chooses to put away $5,775 of earnings at the end of each year for twenty years. How much money will be in Kim's retirement account in twenty years if her investment accounts earns an annual rate of 6.1%?

N = 20 pmt = 5,775
I/Y = 6.1 FV = ? 214,735
P/Y = 1
PV = 0

- [ ] $946,980
- [ ] $48,693
- [ ] $102,255
- [ ] $450,943
- [x] $214,735

6/6

Question 23 Congratulations, you've just won the $2,800,000 state lottery! The lottery commission offers you the choice of $127,000 per year for 25 years or a one-time, lump-sum payment of $1,456,000 If your intentions are to save all of the lottery winnings (regardless of annual cash flow or lump-sum) for retirement in an account that earns 14.00% annually, which payment option should you choose?

N = 25
I/Y = 14
P/Y = 1
PV = 872,861.78
pmt = 127,000
FV = 0

- [ ] Choose the annual payment because the present value of the annuity is greater than the lump-sum payment.
- [ ] Take the lump-sum payment now because the present value of the annuity is greater than the lump-sum payment.
- [ ] You are indifferent between the lump-sum or annuity payment because the present value of the annuity is less than the lump-sum payment.
- [ ] You are indifferent between the lump-sum or annuity payment because the present value of the annuity is greater than the lump-sum payment.
- [x] Take the lump-sum payment now because the present value of the annuity is less than the lump-sum payment.

6/6

Question 24 The 17th National Bank of Tuscaloosa offers a 3-year line of credit in the amount of $27,000 The account carries a 6.00% APR with monthly compounding. At the end of 1 year, how much interest have you paid and what is the banks effective annual rate?

$$EAR = \left(1 + \frac{APR}{m}\right)^m - 1$$

EAR = 6.17%

Interest paid = .0617 x 27,000
= 1,665

- [ ] $1,448 , 7.09%
- [ ] $1,448 , 6.17%
- [x] $1,665 , 6.17%
- [ ] $1,665 , 7.09%
- [ ] $1,259 , 7.09%

6/6

√ **Question 25** You are considering the purchase of an industrial printer for your business. The salesman states that you can purchase the printer today for $84,000 or pay nothing today and make monthly installment payments of $1,869 for 5 years. Your company's current financing rate is 11.00% annually. What is the present value of the monthly payment plan and which payment option should you choose?

- ☐ $113,655 , so you should choose to pay the full price today.
- ☐ $85,940 , so you should elect the monthly installments.
- ☒ $85,940 , so you should choose to pay the full price today.
- ☐ $98,830 , so you should choose to pay the full price today.
- ☐ $113,655 , so you should elect the monthly installments.

6/6

N = 5x12 = 60
I/Y = 11
P/Y = 12
PV = 85,940
pmt = 1869
FV = 0

√ **Question 26** Pear Inc. is issuing a zero-coupon bond that will have a maturity of 20 years. The bond's par value is $1,000 and the current yield to maturity is 5.4%. What is the expected price of this bond, using semiannual compounding?

- ☐ $222
- ☐ $143
- ☐ $534
- ☐ $93
- ☒ $344

6/6

N = 20x2 = 40
I/Y = 5.4
P/Y = 2
PV = ? 344
pmt = 0
FV = 1000

√ **Question 27** Dunder Mifflen just issued a 20-year annual bond with a par value of $1,000 and a coupon rate of 7.4%. The current yield-to-maturity is 5.0%. What is the intrinsic value of the bond and if the bond's current market price is $1,234, what should you do?

- ☐ $1,130 so you buy the bond
- ☐ $1,494 so you do not buy the bond
- ☐ $1,299 so you do not buy the bond
- ☒ $1,299 so you buy the bond
- ☐ $1,130 so you do not buy the bond

6/6

N = 20
I/Y = 5
P/Y = 1
PV = ? 1,299
pmt = .074 x 1000 =
FV = 1000

√ **Question 28** Blackburn Inc. has issued 10-year $1,000 face value, 8% annual coupon bonds with a yield to maturity of 3.0%. What is the annual interest payment for the bond?

- ☐ $125
- ☒ $80
- ☐ $100
- ☐ $51
- ☐ $64

6/6

N = 10
I/Y = 3
P/Y = 1
PV = 0
pmt = ?
FV = 1000
PV = pmt (1/r)
.08 x 1000 = 80

√ **Question 29** Twelve years ago North Central Positronics (NPC) issued twenty year 7.0% semi-annual coupon bonds each with a $1,000 face value. Since then, interest rates have generally fallen and the yield-to-maturity on the NPC bonds is now 3.4%. Given this information, what is the price today for a NPC bond?

- ☐ $1,800
- ☐ $2,161
- ☐ $2,593
- ☐ $1,500
- ☒ $1,250

6/6

N = 8x2 = 16
I/Y = 3.4
P/Y = 2
PV = 1,250
pmt = .07 x 1000 = 70/2 = 35
FV = 1000

√ **Question 30** A bond is issued with a coupon rate of 10% (paid out annually), a maturity of 17 years and a yield to maturity of 2%. If you decide to purchase the bond today for $2,143.35 and hold it for 1 years, what is your overall rate of return on the bond if the yield to maturity at the end of the holding period is 0%?

- ☐ 19.51%
- ☐ 21.46%
- ☐ 23.61%
- ☐ 17.74%
- ☒ 25.97%

6/6

N = 17 − 1 = 16 PV = 2,600

1/Y = 0 pmt = .1 × 1000 = 100

P/Y = 1 FV = 1000

ROR = 2600 + (100) − 2143.35 / 2143.35

ROR = 25.97

Question 31 Last year, the XYZ Corporation had issued 15.0% coupon (semi-annual), 20 year, AA-rated bonds with a face value of $1,000 to finance its business expansion. As of today, the market price of XYZ's bonds are $1,500. What is the current yield to maturity and how can the bonds be classified?

- ☐ ~~9.3% , so these are discount bonds~~
- ☐ ~~10.7% , so these are discount bonds~~
- ☐ ~~12.3% , so these are discount bonds~~
- ☒ 9.3% , so these are premium bonds
- ☐ 12.3% , so these are premium bonds

6/6

P c < ytm

P c > ytm

N = 20 − 1 = 19 × 2 = 38

1/Y = ?

P/Y = 2

PV = 1500

pmt = .15 × 1000 = −150/2 = −75

FV = 1000

N = 20 × 2 = 40 OR 20 − 1 = 19 × 2 = 38

1/Y = ?

P/Y = 2

PV = 1500

pmt = .15 × 1000 = 150/2 = 75

FV = 1000

N =

PV = 1500

FV = 1000

pmt = .15 × 1000 = 150/2 = 75

P/Y = 2 1/Y = 9.3 or 12.3