

Review for Exam 1

Instructions: Please read carefully

- The exam will have 25 multiple choice questions and 5 work problems covering chapter 1, 2, 3, 4, 14, 16.
- Questions in the multiple choice section will be either concept or calculation questions. The calculation questions will be similar to those in the homework and review. However, the concept questions will be related to any topic we have covered in the class. The concept questions in the review and homework are only some sample questions. You should NOT study only topics in the review and homework.
- For the work problems, you need to solve the problems without knowing the possible answers. The questions will be similar to those in the homework and the review except that the possible solutions are not given.
- You can bring a formula sheet to the exam.

Chapter 1

1. There would be no _____ in an efficient stock market.
 - a. underpriced or overpriced stocks
 - b. returns higher than 100%
 - c. commission costs
 - d. taxes
2. A _____ represents an ownership share in a corporation.
 - a. bond
 - b. preferred stock
 - c. common stock
 - d. All of the above.
 - e. B and C
3. In securities markets, the risk-return trade-off implies that assets with higher risk will offer investors _____ expected returns.
 - a. higher
 - b. lower
 - c. the same
 - d. None of the above.
4. Allocation of the investment portfolio across broad asset classes refers to the _____.
 - a. security analysis
 - b. top-down portfolio construction
 - c. asset allocation
 - d. None of the above.
5. Commercial banks are _____.
 - a. lending institutions
 - b. borrowing institutions
 - c. commercial intermediaries
 - d. financial intermediaries
6. Investors can purchase new issues of securities in the _____ market.
 - a. secondary
 - b. primary
 - c. new
 - d. IPO
7. American Depositary Receipts are claims to _____.
 - a. foreign stocks
 - b. American stocks
 - c. North American stocks
 - d. European stocks
8. Firms that specialize in helping companies raise capital by selling securities are called _____.
 - a. industrial banks
 - b. commercial banks

- c. investment banks
 - d. None of the above
9. _____ are financial assets.
- a. Options
 - b. Factories
 - c. Commercial properties
 - d. All of the above are financial assets
10. Portfolio manager with a passive investment strategy will manage a portfolio by _____.
- a. holding a diversified portfolio
 - b. selecting mispriced securities
 - c. timing the performance of securities
 - d. None of the above.
11. _____ financial asset(s).
- A. Buildings are
 - B. Land is a
 - C. Derivatives are
 - D. U.S. Agency bonds are
 - E. C and D
12. _____ are a way U.S. investor can invest in foreign companies.
- A. ADRs
 - B. IRAs
 - C. SDRs
 - D. GNMA's
 - E. Krugerrands

Chapter 2

13. A dollar denominated deposit at a London bank is called _____.
- A) eurodollars
 - B) LIBOR
 - C) fed funds
 - D) banker's acceptance
14. Money market securities are sometimes referred to as "cash equivalent" because
- A) they are marketable
 - B) they are liquid
 - C) they are low-risk
 - D) all of the above
15. _____ computes over 50 country indexes.
- A) Dow Jones
 - B) The Federal Reserve

- C) NASDAQ
 - D) MSCI
16. Deposits of commercial banks at the Federal Reserve are called _____.
- A) bankers acceptances
 - B) federal funds
 - C) repurchase agreements
 - D) time deposits
17. Commercial paper is a short-term security issued by _____ to raise funds.
- A) the Federal Reserve
 - B) commercial banks
 - C) large well-known companies
 - D) the New York Stock Exchange
18. A _____ gives its holder the right to buy an asset for a specified exercise price on or before a specified expiration date.
- A) call option
 - B) futures contract
 - C) put option
 - D) none of the above
19. The Dow Jones Industrial Average is computed by _____.
- A) adding the prices of 30 large "blue-chip" stocks and dividing by 30
 - B) calculating the total market value of the 30 firms in the index and dividing by 30
 - C) adding the prices of the 30 stocks in the index and dividing by a divisor
 - D) adding the prices of the 500 stocks in the index and dividing by a divisor
20. Purchase of a futures contract involves _____
- A) the right to buy an item at a specified price
 - B) the right to sell an item at a specified price
 - C) the obligation to buy an item at a specified price
 - D) the obligation to sell an item at a specified price
21. Which one of the following is not a money market instrument?
- A. a Treasury bill
 - B. a negotiable certificate of deposit
 - C. commercial paper
 - D. a Treasury bond
 - E. a Eurodollar account

22. Which of the following is not a component of the money market is
- A. repurchase agreements
 - B. Eurodollars
 - C. real estate investment trusts
 - D. money market mutual funds
 - E. commercial paper
23. Which of the following is true regarding a firm's securities?
- A. Common dividends are paid before preferred dividends.
 - B. Preferred stockholders have voting rights.
 - C. Preferred dividends are usually cumulative.
 - D. Preferred dividends are contractual obligations.
 - E. Common dividends usually can be paid if preferred dividends have been skipped.
24. The price quotations of Treasury bonds in the Wall Street Journal show an ask price of 104:08 and a bid price of 104:04. As a buyer of the bond what is the dollar price you expect to pay?
- A. \$1,048.00
 - B. \$1,042.50
 - C. \$1,044.00
 - D. \$1,041.25
 - E. \$1040.40
25. If the market prices of each of the 30 stocks in the Dow Jones Industrial Average (DJIA) all change by the same percentage amount during a given day, which stock will have the greatest impact on the DJIA?
- A. The stock trading at the highest dollar price per share.
 - B. The stock with total equity has the higher market value.
 - C. The stock having the greatest amount of equity in its capital structure.
 - D. The stock having the lowest volatility.
 - E. None of the above.
26. A form of short-term borrowing by dealers in government securities is
- A. reserve requirements.
 - B. repurchase agreements.
 - C. banker's acceptances.
 - D. commercial paper.
 - E. brokers' calls.
27. A put option allows the holder to
- A. buy the underlying asset at the strike price on or before the expiration date.
 - B. sell the underlying asset at the strike price on or before the expiration date.
 - C. sell the option in the open market prior to expiration.
 - D. B and C.
 - E. A and C.

Chapter 3

28. Underwriting is one of the services provided by ____.
- A) the SEC
 - B) investment bankers
 - C) publicly traded companies
 - D) FDIC
29. A level ____ subscriber to the NASDAQ system may enter bid and ask prices.
- A) 1
 - B) 2
 - C) 3
 - D) 4
30. _____ is a false statement regarding specialists.
- A) On a stock exchange all buy or sell orders are negotiated through a specialist
 - B) Specialists can not trade for their own accounts
 - C) Specialists earn income from commissions and spreads in stock prices
 - D) Specialists stand ready to trade at quoted bid and ask prices
31. The bulk of most initial public offerings (IPOs) of equity securities go to _____.
- A) institutional investors
 - B) individual investors
 - C) the firm's current shareholders
 - D) day traders
32. _____ is a false statement about the function of investment bankers.
- A) They act as intermediaries between issuers of stocks and investors
 - B) They purchase new securities from corporations and sell them to the public
 - C) They are commercial banks that accept deposits from savers and lend them out to companies
 - D) They act as advisers to companies in helping them analyze their financial needs and find buyers for their securities
33. The bid-ask spread exists because of _____.
- A) market inefficiencies
 - B) poor communication
 - C) the need for dealers to cover expenses and make a modest profit
 - D) none of the above
34. The cost of buying and selling a stock include _____.
- A) broker's commissions
 - B) dealer's bid-asked spread
 - C) price concessions investors may be forced to make
 - D) all of the above

35. You short-sell 200 shares of Tuckerton Trading Co., now selling for \$50 per share. What is your maximum possible loss?
- A) \$50
 - B) \$150
 - C) \$10,000
 - D) unlimited
36. _____ often accompany short sales, and are used to limit potential losses from the short position.
- A) Limit orders
 - B) Restricted orders
 - C) Limit-loss orders
 - D) Stop-buy orders
37. The following statements regarding the specialist are true:
- A. Specialists maintain a book listing outstanding unexecuted limit orders.
 - B. Specialists earn income from commissions and spreads in stock prices.
 - C. Specialists stand ready to trade at quoted bid and ask prices.
 - D. Specialists cannot trade in their own accounts.
 - E. A, B, and C are all true.
38. Which one of the following statements regarding orders is false?
- A. A market order is simply an order to buy or sell a stock immediately at the prevailing market price.
 - B. A limit sell order is where investors specify prices at which they are willing to sell a security.
 - C. If stock ABC is selling at \$50, a limit-buy order may instruct the broker to buy the stock if and when the share price falls below \$45.
 - D. A day order expires at the close of the trading day.
 - E. None of the above.
39. You purchased 100 shares of common stock on margin at \$45 per share. Assume the initial margin is 50% and the stock pays no dividend. What would the maintenance margin be if a margin call is made at a stock price of \$30? Ignore interest on margin.
- A. 0.33
 - B. 0.55
 - C. 0.43
 - D. 0.23
 - E. 0.25

40. Assume you sell short 100 shares of common stock at \$45 per share, with initial margin at 50%. What would be your rate of return if you repurchase the stock at \$40/share? The stock paid no dividends during the period, and you did not remove any money from the account before making the offsetting transaction.
- A. 20%
 - B. 25%
 - C. 22%
 - D. 77%
 - E. none of the above
41. Which of the following orders instructs the broker to sell at or below a specified price?
- A. Limit-sell order
 - B. Stop-loss
 - C. Limit-buy order
 - D. Stop-buy order
 - E. Market order
42. Shelf registration
- A. is a way of placing issues in the primary market.
 - B. allows firms to register securities for sale over a two-year period.
 - C. increases transaction costs to the issuing firm.
 - D. A and B.
 - E. A and C.
43. The finalized registration statement for new securities approved by the SEC is called
- A. a red herring
 - B. the preliminary statement
 - C. the prospectus
 - D. a best-efforts agreement
 - E. a firm commitment
44. When a firm markets new securities, a preliminary registration statement must be filed with
- A. the exchange on which the security will be listed.
 - B. the Securities and Exchange Commission.
 - C. the Federal Reserve.
 - D. all other companies in the same line of business.
 - E. the Federal Deposit Insurance Corporation.

45. In a typical underwriting arrangement the investment banking firm
I) sells shares to the public via an underwriting syndicate.
II) purchases the securities from the issuing company.
III) assumes the full risk that the shares may not be sold at the offering price.
IV) agrees to help the firm sell the issue to the public but does not actually purchase the securities.

- A. I, II, and III
- B. I, III, and IV
- C. I and IV
- D. II and III
- E. I and II

46. You purchased 100 shares of XON common stock on margin at \$60 per share. Assume the initial margin is 50% and the maintenance margin is 30%. Below what stock price level would you get a margin call? Assume the stock pays no dividend; ignore interest on margin.

- A. \$42.86
- B. \$50.75
- C. \$49.67
- D. \$80.34
- E. none of the above

47. Assume you sell short 100 shares of common stock at \$30 per share, with initial margin at 50%. What would be your rate of return if you repurchase the stock at \$35/share? The stock paid no dividends during the period, and you did not remove any money from the account before making the offsetting transaction.

- A. -33.33%
- B. -25.63%
- C. -57.14%
- D. -77.23%
- E. none of the above

48. Assume you sold short 100 shares of common stock at \$70 per share. The initial margin is 50%. What would be the maintenance margin if a margin call is made at a stock price of \$85?

- A. 40.5%
- B. 20.5%
- C. 35.5%
- D. 23.5%
- E. none of the above

Chapter 4

49. Investors in a common stock mutual fund incur an income tax liability when _____.
- they sell their mutual fund shares at a gain
 - the mutual fund sells stock in its portfolio at a gain
 - the mutual fund receives dividends on the stock owned by the mutual fund
 - all of the above
50. Cost incurred by a mutual fund in managing the fund, including administrative expenses and advisory fees, are referred to as the fund's _____.
- 12b-1 charges
 - front-end load
 - management fee
 - operating expenses
51. Which of the following is an advantage to investors of exchange traded funds (ETFs) that is not available to investors in open-end mutual funds?
- ETFs allow investors to invest in broad U.S. market indexes as well as international indexes.
 - Investors can avoid incurring an expense in the form of a bid-ask spread by purchasing an ETF rather than investing in an open-end mutual fund.
 - ETFs offer a potential tax advantage to investors who incur capital gains taxes only when they sell ETF shares.
 - ETF prices can not deviate from net asset value.
52. A type of mutual fund that maintains relatively stable proportions of its funds invested in equities and in fixed-income securities is called a _____.
- specialized sector fund
 - index fund
 - asset allocation fund
 - balanced fund
53. A real estate investment trust is a(n) _____.
- open-end mutual fund that invests primarily in mortgage and construction loans
 - closed-end mutual fund that invests directly in real estate
 - hedge fund that invests in real estate or loans secured by real estate
 - none of the above
54. A mutual fund has \$500 million in assets at the beginning of the year and 20 million shares outstanding throughout the year. The assets in the fund increase in price by 10%. The fund charges 12b-1 fees of 1%. This fee is imposed on year-end asset values. There are no capital gains distributions from the fund during the year. What is the end of year net asset value for the fund?
- \$25.00
 - \$27.23
 - \$27.25
 - \$27.50

55. Shares of a closed-end fund _____.
- always trade at net asset value, because large investors can redeem their shares in the fund for a portfolio of stocks
 - always trade at net asset value, because all investors can redeem their shares in the fund for net asset value
 - can trade at a substantial discount from net asset value, although such a discount tends to dissipate over time
 - can trade at a substantial discount from net asset value but can not trade at a premium above net asset value
56. A closed-end fund has a portfolio currently worth \$350 million. The fund has liabilities of \$5 million and 17 million shares outstanding. What is the net asset value of the fund?
- \$20.88
 - \$20.29
 - \$20.59
 - \$29.17
57. Which of the following statements is true about hedge funds?
- Hedge funds are mutual funds that specialize in derivative investments designed primarily for hedging purposes.
 - Because of their large size and varied investments, hedge funds are closely regulated by both the SEC and the CFTC.
 - The term hedge fund derives from a common hedge fund strategy based on anticipated changes in relative valuations in two market sectors.
 - Investments in hedge funds are very liquid, which means that investors in a hedge fund can withdraw their investments at any time without risk of loss in market value.
58. An open-end fund has a net asset value of \$13.40 per share. The fund is sold with a front-end load of 4%. What is the offering price?
- \$13.96
 - \$12.86
 - \$13.94
 - \$12.88

59. Diversified Portfolios had year-end assets of \$279,000,000 and liabilities of \$43,000,000. If Diversified's NAV was \$42.13, how many shares must have been held in the fund?

- A. 43,000,000
- B. 6,488,372
- C. 5,601,709
- D. 1,182,203
- E. None of the above.

60. Investors' Choice Fund had NAV per share of \$37.25 on January 1, 2007. On December 31 of the same year the fund's rate of return for the year was 17.3%. Income distributions were \$1.14 and the fund had capital gain distributions of \$1.35. Without considering taxes and transactions costs, what ending NAV would you calculate for Investors' Choice?

- A. \$41.20
- B. \$33.88
- C. \$43.69
- D. \$42.03
- E. \$46.62

61. Commingled funds are

- A. amounts invested in equity and fixed-income mutual funds.
- B. funds that may be purchased at intervals of 3, 6, or 12 month intervals at the discretion of management.
- C. amounts invested in domestic and global equities.
- D. closed-end funds that may be repurchased only once every two years at the discretion of mutual fund management.
- E. partnerships of investors that pool their funds, which are then managed for a fee.

62. Patty O'Furniture purchased 100 shares of Green Isle mutual fund at a net asset value of \$42 per share. During the year Patty received dividend income distributions of \$2.00 per share and capital gains distributions of \$4.30 per share. At the end of the year the shares had a net asset value of \$40 per share. What was Patty's rate of return on this investment?

- A. 5.43%
- B. 10.24%
- C. 7.19%
- D. 12.44%
- E. 9.18%

63. You purchased shares of a mutual fund at a price of \$20 per share at the beginning of the year and paid a front-end load of 5.75%. If the securities in which the fund invested increased in value by 11% during the year, and the funds expense ratio was 1.25%, your return if you sold the fund at the end of the year would be _____.

- A. 4.33
- B. 3.44
- C. 2.45
- D. 6.87
- E. None of the above

Chapter 14

64. The primary difference between Treasury notes and bonds is _____.

- A) maturity at issue
- B) default risk
- C) coupon rate
- D) tax status

65. A _____ bond is a bond where the bondholder has the right to cash in the bond before maturity at a specific price after a specific date.

- A) callable
- B) coupon
- C) put
- D) treasury

66. Bonds with coupon rates that fall when the general level of interest rates rise are called _____.

- A) invertible bonds
- B) convertible bonds
- C) reverse floaters
- D) index bonds

67. The issuer of a ___ bond may choose to pay interest either in cash or in additional bonds.

- A) asset backed bonds
- B) TIPS
- C) catastrophe
- D) pay in kind

68. In an era of particularly low interest rates, which of the following bonds is most likely to be called?

- A) zero coupon bonds
- B) coupon bonds selling at a discount
- C) coupon bonds selling at a premium
- D) floating rate bonds

69. A convertible bond has a par value of \$1,000 but its current market price is \$950. The current price of the issuing company's stock is \$19 and the conversion ratio is 40 shares. The bond's conversion premium is _____.
- A) \$50.00
 - B) \$190.00
 - C) \$200.00
 - D) \$240.00
70. A coupon bond which pays interest of \$40 annually, has a par value of \$1,000, matures in 5 years, and is selling today at a \$159.71 discount from par value. The actual yield to maturity on this bond is _____.
- A) 5%
 - B) 6%
 - C) 7%
 - D) 8%
71. A coupon bond which pays interest semi-annually, has a par value of \$1,000, matures in 5 years, and has a yield to maturity of 8%. If the coupon rate is 10%, the intrinsic value of the bond today will be _____.
- A) \$855.55
 - B) \$1,000
 - C) \$1,081
 - D) \$1,100
72. A coupon bond pays semi-annual interest is reported as having an ask price of 117% of its \$1,000 par value in the Wall Street Journal. If the last interest payment was made 2 months ago and the coupon rate is 6%, the invoice price of the bond will be _____.
- A) \$1,140
 - B) \$1,170
 - C) \$1,180
 - D) \$1,200
73. You purchased a 5-year annual interest coupon bond one year ago. Its coupon interest rate was 6% and its par value was \$1,000. At the time you purchased the bond, the yield to maturity was 4%. If you sold the bond after receiving the first interest payment and the bond's yield to maturity had changed to 3%, your annual total rate of return on holding the bond for that year would have been _____.
- A) 5.00%
 - B) 5.51%
 - C) 7.61%
 - D) 8.95%

74. A bond pays a semi-annual coupon and the last coupon was paid 74 days ago. If the annual coupon payment is \$65, what is the accrued interest?
- A) \$13.21
 - B) \$14.12
 - C) \$15.44
 - D) \$16.32
75. The invoice price of a bond that a buyer would pay is equal to
- A. the asked price plus accrued interest.
 - B. the asked price less accrued interest.
 - C. the bid price plus accrued interest.
 - D. the bid price less accrued interest.
 - E. the bid price.
76. A coupon bond is reported as having an ask price of 108% of the \$1,000 par value in the Wall Street Journal. If the last interest payment was made one month ago and the coupon rate is 9%, the invoice price of the bond will be _____.
- A. \$1,087.50
 - B. \$1,110.10
 - C. \$1,150.00
 - D. \$1,160.25
 - E. none of the above
77. A coupon bond that pays interest annually has a par value of \$1,000, matures in 5 years, and has a yield to maturity of 10%. The intrinsic value of the bond today will be _____ if the coupon rate is 7%.
- A. \$712.99
 - B. \$620.92
 - C. \$1,123.01
 - D. \$886.28
 - E. \$1,000.00
78. A coupon bond that pays interest of \$100 annually has a par value of \$1,000, matures in 5 years, and is selling today at a \$72 discount from par value. The yield to maturity on this bond is _____.
- A. 6.00%
 - B. 8.33%
 - C. 12.00%
 - D. 60.00%
 - E. none of the above
79. The yield to maturity on a bond is _____.
- A. below the coupon rate when the bond sells at a discount, and equal to the coupon rate when the bond sells at a premium.
 - B. the discount rate that will set the present value of the payments equal to the bond price.
 - C. based on the assumption that any payments received are reinvested at the coupon rate.
 - D. none of the above.
 - E. A, B, and C.

80. Subordination clauses in bond indentures

- A. may restrict the amount of additional borrowing the firm can undertake.
- B. are sometimes referred to as "me-first" rules.
- C. provide higher priority to senior creditors in the event of bankruptcy.
- D. all of the above are true.
- E. both B and C are true.

81. You purchased an annual interest coupon bond one year ago that now has 18 years remaining until maturity. The coupon rate of interest was 11% and par value was \$1,000. At the time you purchased the bond, the yield to maturity was 10%. The amount you paid for this bond one year ago was

- A. \$1,057.50
- B. \$1,075.50
- C. \$1,083.65
- D. \$1,092.46
- E. \$1,104.13

Chapter 16

82. Ceteris paribus, the duration of a bond is negatively correlated with the bond's

- A. time to maturity.
- B. coupon rate.
- C. yield to maturity.
- D. B and C.
- E. none of the above.

83. Holding other factors constant, the interest-rate risk of a coupon bond is higher when the bond's:

- A. term-to-maturity is higher.
- B. coupon rate is higher.
- C. yield to maturity is higher.
- D. all of the above.
- E. none of the above.

84. Holding other factors constant, the interest-rate risk of a coupon bond is lower when the bond's:

- A. term-to-maturity is lower.
- B. coupon rate is higher.
- C. yield to maturity is lower.
- D. A and B.
- E. All of the above.

85. The duration of a 5-year zero-coupon bond is

- A. smaller than 5.
- B. larger than 5.
- C. equal to 5.
- D. equal to that of a 5-year 10% coupon bond.
- E. none of the above.

86. The basic purpose of immunization is to

- A. eliminate default risk.
- B. produce a zero net interest-rate risk.
- C. offset price and reinvestment risk.
- D. A and B.
- E. B and C.

87. Which one of the following statements is false concerning the duration of a perpetuity?

- A. The duration of 15% yield perpetuity that pays \$100 annually is longer than that of a 15% yield perpetuity that pays \$200 annually.
- B. The duration of a 15% yield perpetuity that pays \$100 annually is shorter than that of a 15% yield perpetuity that pays \$200 annually.
- C. The duration of a 15% yield perpetuity that pays \$100 annually is equal to that of 15% yield perpetuity that pays \$200 annually.
- D. A and B
- E. All of the above.

88. Immunization is not a strictly passive strategy because

- A. it requires choosing an asset portfolio that matches an index.
- B. there is likely to be a gap between the values of assets and liabilities in most portfolios.
- C. it requires frequent rebalancing as maturities and interest rates change.
- D. durations of assets and liabilities fall at the same rate.
- E. none of the above.

89. Which of the following are true about the interest-rate sensitivity of bonds?

- I) Bond prices and yields are inversely related.
 - II) Prices of long-term bonds tend to be more sensitive to interest rate changes than prices of short-term bonds.
 - III) Interest-rate risk is directly related to the bond's coupon rate.
 - IV) The sensitivity of a bond's price to a change in its yield to maturity is inversely related to the yield to maturity at which the bond is currently selling.
- A. I and II
 - B. I and III
 - C. I, II, and IV
 - D. II, III, and IV
 - E. I, II, III, and IV

90. Par value bond GE has a modified duration of 11. Which one of the following statements regarding the bond is true?

- A. If the market yield increases by 1% the bond's price will decrease by \$55.
- B. If the market yield increases by 1% the bond's price will increase by \$55.
- C. If the market yield increases by 1% the bond's price will decrease by \$110.
- D. If the market yield increases by 1% the bond's price will increase by \$110.
- E. None of the above.

91. Pension funds pay lifetime annuities to recipients. If a firm remains in business indefinitely, the pension obligation will resemble a perpetuity. Suppose, therefore, that you are managing a pension fund with obligations to make perpetual payments of \$2 million per year to beneficiaries. The yield to maturity on all bonds is 16%.

- a. If the duration of five-year maturity bonds with coupon rates of 12% (paid annually) is 4 years and the duration of 20-year maturity bonds with coupon rates of 6% (paid annually) is 11 years, how much of each of these coupon bonds (in market value) will you want to hold to both fully fund and immunize your obligation?
- b. What will be the *par value* of your holdings in the 20-year coupon bond?

92. You will be paying \$10,000 a year in tuition expenses at the end of the next 2 years. Bonds currently yield 8%

a. What is the present value and duration of your obligation

b. What maturity zero coupon bond would immunize your obligation

c. Suppose you buy a zero-coupon bond with value and duration equal to your obligation. Now suppose that the rate immediately increase to 9%. What happen to your net position, that is to the difference between value of the bond and that of your tuition obligation? What is rates fall to 7%

Answers

1. a

2. e

3. a

4. c

5. d

6. b

7. a

8. c

9. a

10. a

11. e

12. a

13. Answer: A

14. Answer: D

15. Answer: D

16. Answer: B

17. Answer: C

18. Answer: A

19. Answer: C

20. Answer: C

21. D

Money market instruments are instruments with maturities of one year or less, which applies to all of the above except Treasury bonds.

22. C

Real estate investment trusts are not short-term investments.

23. C

Preferred dividends must be paid first and any skipped preferred dividends must be paid before common dividends may be paid.

24. B

You pay the asking price of the dealer, $104 \frac{8}{32}$, or 104.25% of \$1,000, or \$1042.50.

25. A

Higher priced stocks affect the DJIA more than lower priced stocks; other choices are not relevant.

26. B

Repurchase agreements are a form of short-term borrowing where a dealer sells government securities to an investor with an agreement to buy back those same securities at a slightly higher price.

27. D

A put option allows the buyer to sell the underlying asset at the strike price on or before the expiration date; the option contract also may be sold prior to expiration.

28. Answer: B

29. Answer: C

30. Answer: B

31. Answer: A

32. Answer: C

33. Answer: C

34. Answer: D

35. Answer: D

There is no upper limit to the price of a share of stock, therefore no upper limit the price you will have to pay to replace the 200 shares of Tuckerton.

36. Answer: D

37. E

The specialists' functions are all of the items listed in A, B, and C. In addition, specialists trade in their own accounts.

38. E

All of the order descriptions above are correct.

39. E

$100 \text{ shares} * \$45/\text{share} * 0.5 = \$4,500 * 0.5 = \$2,250$ (loan amount); $X = [100(\$30) - \$2,250]/100(\$30)$; $X = 0.25$.

40. C

$\text{Profit on stock} = (\$45 - \$40) * 100 = \500 , $\$500/\$2,250$ (initial investment) = 22.22%.

41. B

Stop-loss orders are to be executed if the market price decreases to the specified limit price.

42. D

Shelf registration lowers transactions costs to the firm as the firm may register issues for a longer period than in the past, and thus requires the services of the investment banker less frequently.

43. C

The prospectus is the finalized registration statement approved by the SEC.

44. B.

45. A

A typical underwriting arrangement is made on a firm commitment basis.

46. A

$100 \text{ shares} * \$60 * .5 = \$6,000 * 0.5 = \$3,000$ (loan amount); $0.30 = (100P - \$3,000)/100P$; $30P = 100P - \$3,000$; $-70P = -\$3,000$; $P = \$42.86$

47. A

$\text{Profit on stock} = (\$30 - \$35)(100) = -500$; initial investment = $(\$30)(100)(.5) = \$1,500$; return = $-\$500/\$1,500 = -33.33\%$.

48. D

$\$7,000 * 1.5 = \$10,500$; $[\$10,500 - 100(\$85)]/100(\$85) = 23.5\%$.

49. Answer: D

50. Answer: D

51. Answer: C

52. Answer: D

53. Answer: D

54. Answer: B

55. Answer: C

56. Answer: B

57. Answer: C

58. Answer: A

59. C

$$(\$279,000,000 - 43,000,000) / \$42.13 = 5,601,708.996.$$

60. A

$$.173 = (P - \$37.25 + 1.14 + 1.35) / \$37.25; P = \$41.20$$

61.E

Commingled funds are partnerships of investors that pool their funds, which are then managed for a fee.

62. B

$$R = (\$40 - 42 + 2 + 4.3) / \$42 = 10.238\%$$

63. B

$$\{[\$20 * .9425 * (1.11 - .0125)] - \$20\} / \$20 = 3.44\%$$

64. Answer: A

65. Answer: C

66. Answer: C

67. Answer: D

68. Answer: C

69. Answer: B

$$\text{Conversion Premium} = 950 - 40(19) = 190.00$$

70. Answer: D

$$\text{PMT} = 40, \text{FV} = 1000, \text{N} = 5, \text{PV} = -840.29, \text{CPT I/Y} = 8$$

71. Answer: C

$$\text{N} = 10, \text{FV} = 1000, \text{YTM} = 4, \text{PMT} = 50, \text{CPT PV} = 1081$$

72. Answer: C

$$\text{Invoice Price} = 1,000(1.17) + 60(2/12) = 1,180$$

73. Answer: C

$$V_{.1} = 60(4.452) + 1,000(.822) = 1,089.12$$

$$V_0 = 60(3.717) + 1,000(.889) = 1,112.02$$

$$\text{HPR} = [60 + (1,112.02 - 1,089.12)]/1,089.12 = 7.61\%$$

74. Answer: A

$$\text{Accrued interest} = (65/2) \times (74/182) = 13.21$$

75. A

The buyer of a bond will buy at the asked price and will also be invoiced for any accrued interest due to the seller.

76. A

$$\$1,080 + \$7.5 \text{ (accrued interest)} = \$1,087.50.$$

77. D

$$\text{FV} = 1000, \text{PMT} = 70, n = 5, i = 10, \text{PV} = 886.28.$$

78. C

$$\text{FV} = 1000, \text{PMT} = 100, n = 5, \text{PV} = -928, i = 11.997\%$$

79. B

The reverse of A is true; for C to be true payments must be reinvested at the yield to maturity.

80. D

All of the statements correctly describe subordination clauses.

81. C

$$\text{FV} = 1000, \text{PMT} = 110, n = 19, i = 10, \text{PV} = 1,083.65$$

82. D

Duration is negatively correlated with coupon rate and yield to maturity.

83. A

The longer the maturity, the greater the interest-rate risk. The lower the coupon rate, the greater the interest-rate risk. The lower the yield to maturity, the greater the interest-rate risk. These concepts are reflected in the duration rules; duration is a measure of bond price sensitivity to interest rate changes (interest-rate risk).

84. D

The longer the maturity, the greater the interest-rate risk. The lower the coupon rate, the greater the interest-rate risk. The lower the yield to maturity, the greater the interest-rate risk. These concepts are reflected in the duration rules; duration is a measure of bond price sensitivity to interest rate changes (interest-rate risk).

85. C

Duration of a zero-coupon bond equals the bond's maturity.

86. E

When a portfolio is immunized, price risk and reinvestment risk exactly offset each other resulting in zero net interest-rate risk.

87. D

Duration of a perpetuity = $(1 + y)/y$; thus, the duration of a perpetuity is determined by the yield and is independent of the cash flow.

88. C

As time passes the durations of assets and liabilities fall at different rates, requiring portfolio rebalancing. Further, every change in interest rates creates changes in the durations of portfolio assets and liabilities.

89.C

90. C

$$\Delta P/P = -D \cdot \Delta y; -\$110 = -11(0.01) \times \$1,000$$

91. a. PV of obligation = \$2 million/0.16 = \$12.5 million

Duration of obligation = 1.16/0.16 = 7.25 years

Call w the weight on the 5-year maturity bond (which has duration of 4 years).

Then:

$$(w \times 4) + [(1 - w) \times 11] = 7.25 \Rightarrow w = 0.5357$$

Therefore: $0.5357 \times \$12.5 = \6.7 million in the 5-year bond and

$0.4643 \times \$12.5 = \5.8 million in the 20-year bond.

b. The price of the 20-year bond is:

\$407.12

Therefore, the bond sells for 0.4071 times its par value, and:

$$\text{Market value} = \text{Par value} \times 0.4071$$

$$\$5.8 \text{ million} = \text{Par value} \times 0.4071 \Rightarrow \text{Par value} = \$14.25 \text{ million}$$

Another way to see this is to note that each bond with par value \$1,000 sells for \$407.12. If total market value is \$5.8 million, then you need to buy approximately 14,250 bonds, resulting in total par value of \$14.25 million.

92. a. PV of the obligation = \$17,832.65

(1)	(2)	(3)	(4)	(5)
Time until Payment (years)	Cash Flow	PV of CF (Discount rate = 8%)	Weight	Column (1) \times Column (4)

1	\$10,000.00	\$9,259.259	0.51923	0.51923
2	\$10,000.00	<u>\$8,573.388</u>	<u>0.48077</u>	<u>0.96154</u>
	Column Sums	\$17,832.647	1.00000	1.48077

Duration = 1.4808 years

- b. A zero-coupon bond maturing in 1.4808 years would immunize the obligation. Since the present value of the zero-coupon bond must be \$17,832.65, the face value (i.e., the future redemption value) must be:

$$\$17,832.65 \times 1.08^{1.4808} = \$19,985.26$$

- c. If the interest rate increases to 9%, the zero-coupon bond would decrease in value to:

$$\frac{\$19,985.26}{1.09^{1.4808}} = \$17,590.92$$

The present value of the tuition obligation would decrease to: \$17,591.11

The net position decreases in value by: \$0.19

If the interest rate decreases to 7%, the zero-coupon bond would increase in value to:

$$\frac{\$19,985.26}{1.07^{1.4808}} = \$18,079.99$$

The present value of the tuition obligation would increase to: \$18,080.18

The net position decreases in value by: \$0.19

The reason the net position changes at all is that, as the interest rate changes, so does the duration of the stream of tuition payments.

Duration

Duration is a measure of the time it takes to recoup one's investment in a bond, assuming that one purchased the bond for \$1,000. Duration is shorter than term to maturity on coupon bonds as cash flows are received prior to maturity. Duration equals term to maturity for zero-coupon bonds, as no cash flows are received prior to maturity. Duration measures the price sensitivity of a bond with respect interest rate changes. The longer the maturity of the bond, the lower the coupon rate of the bond, and the higher the yield to maturity of the bond, the greater the duration. Interest-rate risk consists of two components: price risk and reinvestment risk. These two risk components move in opposite direction; if duration equals horizon date, the two types of risk exactly offset each other, resulting in zero net interest-rate risk. This portfolio management strategy is immunization. Some of the problems associated with this strategy are: the portfolio is protected against one interest rate change only; thus, once interest rates change, the portfolio must be rebalanced to maintain immunization; duration assumes a horizontal yield curve (not the shape most commonly observed); duration also assumes that any shifts in the yield curve are parallel (resulting in a continued horizontal yield curve); in addition, the portfolio manager may have trouble locating acceptable bonds that produce immunized portfolios; finally, both duration and horizon dates change with the mere passage of time, but not in a lockstep fashion, thus rebalancing is required. Although immunization is considered a passive bond portfolio management strategy, considerable rebalancing must occur, as indicated above. The portfolio manager must consider the tradeoffs between the transaction costs and not being perfectly immunized at all times.