ch14

Student: _____

1. The current yield on a bond is equal to _____.

   A. annual interest divided by the current market price
   B. the yield to maturity
   C. annual interest divided by the par value
   D. the internal rate of return
   E. none of the above

2. If a 7% coupon bond is trading for $975.00, it has a current yield of _____ percent.

   A. 7.00
   B. 6.53
   C. 7.24
   D. 8.53
   E. 7.18

3. If a 7.25% coupon bond is trading for $982.00, it has a current yield of _____ percent.

   A. 7.38
   B. 6.53
   C. 7.25
   D. 8.53
   E. 7.18

4. If a 6.75% coupon bond is trading for $1016.00, it has a current yield of _____ percent.

   A. 7.38
   B. 6.64
   C. 7.25
   D. 8.53
   E. 7.18

5. If a 7.75% coupon bond is trading for $1019.00, it has a current yield of _____ percent.

   A. 7.38
   B. 6.64
   C. 7.25
   D. 7.61
   E. 7.18

6. If a 6% coupon bond is trading for $950.00, it has a current yield of _____ percent.

   A. 6.5
   B. 6.3
   C. 6.1
   D. 6.0
   E. 6.6

7. If an 8% coupon bond is trading for $1025.00, it has a current yield of _____ percent.

   A. 7.8
   B. 8.7
   C. 7.6
   D. 7.9
   E. 8.1

8. If a 7.5% coupon bond is trading for $1050.00, it has a current yield of _____ percent.

   A. 7.0
   B. 7.4
   C. 7.1
   D. 6.9
   E. 6.7

9. A coupon bond pays annual interest, has a par value of $1,000, matures in 4 years, has a coupon rate of 10%, and has a yield to maturity of 12%. The current yield on this bond is _____.

   A. 10.65%
   B. 10.45%
   C. 10.95%
   D. 10.52%
   E. none of the above

10. A coupon bond pays annual interest, has a par value of $1,000, matures in 4 years, has a coupon rate of 8.25%, and has a yield to maturity of 8.64%. The current yield on this bond is _____.

    A. 8.65%
    B. 8.45%
    C. 7.95%
    D. 8.36%
    E. none of the above

11. A coupon bond pays annual interest, has a par value of $1,000, matures in 12 years, has a coupon rate of 11%, and has a yield to maturity of 12%. The current yield on this bond is _____.

    A. 10.39%
    B. 10.43%
    C. 10.58%
    D. 10.66%
    E. none of the above

12. A coupon bond pays annual interest, has a par value of $1,000, matures in 12 years, has a coupon rate of 8.7%, and has a yield to maturity of 7.9%. The current yield on this bond is _____.

    A. 8.39%
    B. 8.43%
    C. 8.83%
    D. 8.66%
    E. none of the above

13. Of the following four investments, _____ is considered the safest.

    A. commercial paper
    B. corporate bonds
    C. U.S. Agency issues
    D. Treasury bonds
    E. Treasury bills

14. Of the following four investments, _____ is considered the least risky.

    A. Treasury bills
    B. corporate bonds
    C. U.S. Agency issues
    D. Treasury bonds
    E. commercial paper

15. To earn a high rating from the bond rating agencies, a firm should have

    A. a low times interest earned ratio
    B. a low debt to equity ratio
    C. a high quick ratio
    D. B and C
    E. A and C

16. A firm with a low rating from the bond rating agencies would have

    A. a low times interest earned ratio
    B. a low debt to equity ratio
    C. a low quick ratio
    D. B and C
    E. A and C

17. At issue, coupon bonds typically sell _____.

    A. above par value
    B. below par
    C. at or near par value
    D. at a value unrelated to par
    E. none of the above

18. Accrued interest

    A. is quoted in the bond price in the financial press.
    B. must be paid by the buyer of the bond and remitted to the seller of the bond.
    C. must be paid to the broker for the inconvenience of selling bonds between maturity dates.
    D. A and B.
    E. A and C.

19. 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.

20. An 8% coupon U.S. Treasury note pays interest on May 30 and November 30 and is traded for settlement on August 15. The accrued interest on the $100,000 face value of this note is _____.

    A. $491.80
    B. $800.00
    C. $983.61
    D. $1,661.20
    E. none of the above

21. 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 months 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

22. A coupon bond is reported as having an ask price of 113% of the $1,000 par value in the Wall Street Journal. If the last interest payment was made two months ago and the coupon rate is 12%, the invoice price of the bond will be _____.

    A. $1,100
    B. $1,110
    C. $1,150
    D. $1,160
    E. none of the above

23. The bonds of Ford Motor Company have received a rating of "D" by Moody's. The "D" rating indicates

    A. the bonds are insured
    B. the bonds are junk bonds
    C. the bonds are referred to as "high yield" bonds
    D. A and B
    E. B and C

24. The bond market

    A. can be quite "thin".
    B. primarily consists of a network of bond dealers in the over the counter market.
    C. consists of many investors on any given day.
    D. A and B.
    E. B and C.

25. Ceteris paribus, the price and yield on a bond are

    A. positively related.
    B. negatively related.
    C. sometimes positively and sometimes negatively related.
    D. not related.
    E. indefinitely related.

26. The _____ is a measure of the average rate of return an investor will earn if the investor buys the bond now and holds until maturity.

    A. current yield
    B. dividend yield
    C. P/E ratio
    D. yield to maturity
    E. discount yield

27. The _____ gives the number of shares for which each convertible bond can be exchanged.

    A. conversion ratio
    B. current ratio
    C. P/E ratio
    D. conversion premium
    E. convertible floor

28. A coupon bond is a bond that _____.

    A. pays interest on a regular basis (typically every six months)
    B. does not pay interest on a regular basis but pays a lump sum at maturity
    C. can always be converted into a specific number of shares of common stock in the issuing company
    D. always sells at par
    E. none of the above

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

    A. callable
    B. coupon
    C. put
    D. Treasury
    E. zero-coupon

30. Callable bonds

    A. are called when interest rates decline appreciably.
    B. have a call price that declines as time passes.
    C. are called when interest rates increase appreciably.
    D. A and B.
    E. B and C.

31. A Treasury bond due in one year has a yield of 5.7%; a Treasury bond due in 5 years has a yield of 6.2%. A bond issued by Ford Motor Company due in 5 years has a yield of 7.5%; a bond issued by Shell Oil due in one year has a yield of 6.5%. The default risk premiums on the bonds issued by Shell and Ford, respectively, are

    A. 1.0% and 1.2%
    B. 0.7% and 1.5%
    C. 1.2% and 1.0%
    D. 0.8% and 1.3%
    E. none of the above

32. A Treasury bond due in one year has a yield of 4.6%; a Treasury bond due in 5 years has a yield of 5.6%. A bond issued by Lucent Technologies due in 5 years has a yield of 8.9%; a bond issued by Mobil due in one year has a yield of 6.2%. The default risk premiums on the bonds issued by Mobil and Lucent Technologies, respectively, are:

    A. 1.6% and 3.3%
    B. 0.5% and .7%
    C. 3.3% and 1.6%
    D. 0.7% and 0.5%
    E. none of the above

33. A Treasury bond due in one year has a yield of 6.2%; a Treasury bond due in 5 years has a yield of 6.7%. A bond issued by Xerox due in 5 years has a yield of 7.9%; a bond issued by Exxon due in one year has a yield of 7.2%. The default risk premiums on the bonds issued by Exxon and Xerox, respectively, are

    A. 1.0% and 1.2%
    B. 0.5% and .7%
    C. 1.2% and 1.0%
    D. 0.7% and 0.5%
    E. none of the above

34. A Treasury bond due in one year has a yield of 4.3%; a Treasury bond due in 5 years has a yield of 5.06%. A bond issued by Boeing due in 5 years has a yield of 7.63%; a bond issued by Caterpillar due in one year has a yield of 7.16%. The default risk premiums on the bonds issued by Boeing and Caterpillar, respectively, are

    A. 3.33% and 2.10%
    B. 2.57% and 2.86%
    C. 1.2% and 1.0%
    D. 0.76% and 0.47%
    E. none of the above

35. Floating-rate bonds are designed to _____ while convertible bonds are designed to _____.

    A. minimize the holders' interest rate risk; give the investor the ability to share in the price appreciation of the company's stock
    B. maximize the holders' interest rate risk; give the investor the ability to share in the price appreciation of the company's stock
    C. minimize the holders' interest rate risk; give the investor the ability to benefit from interest rate changes
    D. maximize the holders' interest rate risk; give investor the ability to share in the profits of the issuing company
    E. none of the above

36. A coupon bond that pays interest annually is selling at par value of $1,000, matures in 5 years, and has a coupon rate of 9%. The yield to maturity on this bond is:

    A. 8.0%
    B. 8.3%
    C. 9.0%
    D. 10.0%
    E. none of the above

37. A coupon bond that pays interest semi-annually is selling at par value of $1,000, matures in 7 years, and has a coupon rate of 8.6%. The yield to maturity on this bond is:

    A. 8.0%
    B. 8.6%
    C. 9.0%
    D. 10.0%
    E. none of the above

38. 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

39. A coupon bond that pays interest annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 9.3%. The intrinsic value of the bond today will be _____ if the coupon rate is 8.5%.

    A. $712.99
    B. $960.14
    C. $1,123.01
    D. $886.28
    E. $1,000.00

40. 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 12%.

    A. $922.77
    B. $924.16
    C. $1,075.82
    D. $1,077.20
    E. none of the above

41. A coupon bond that pays interest semi-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 8%.

    A. $922.78
    B. $924.16
    C. $1,075.80
    D. $1,077.20
    E. none of the above

42. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 9.3%. The intrinsic value of the bond today will be _____ if the coupon rate is 9.5%.

    A. $922.77
    B. $1,010.12
    C. $1,075.80
    D. $1,077.22
    E. none of the above

43. A coupon bond that pays interest semi-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 12%.

    A. $922.77
    B. $924.16
    C. $1,075.80
    D. $1,077.22
    E. none of the above

44. 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

45. You purchased an annual interest coupon bond one year ago that now has 6 years remaining until maturity. The coupon rate of interest was 10% and par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. The amount you paid for this bond one year ago was

    A. $1,057.50.
    B. $1,075.50.
    C. $1,088.50.
    D. $1.092.46.
    E. $1,104.13.

46. You purchased an annual interest coupon bond one year ago that had 6 years remaining to maturity at that time. The coupon interest rate was 10% and the par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the yield to maturity continued to be 8%, your annual total rate of return on holding the bond for that year would have been _____.

    A. 7.00%
    B. 7.82%
    C. 8.00%
    D. 11.95%
    E. none of the above

47. Consider two bonds, A and B. Both bonds presently are selling at their par value of $1,000. Each pays interest of $120 annually. Bond A will mature in 5 years while bond B will mature in 6 years. If the yields to maturity on the two bonds change from 12% to 10%, _____.

A. both bonds will increase in value, but bond A will increase more than bond B
B. both bonds will increase in value, but bond B will increase more than bond A
C. both bonds will decrease in value, but bond A will decrease more than bond B
D. both bonds will decrease in value, but bond B will decrease more than bond A
E. none of the above

48. A zero-coupon bond has a yield to maturity of 9% and a par value of $1,000. If the bond matures in 8 years, the bond should sell for a price of _____ today.

A. 422.41
B. $501.87
C. $513.16
D. $483.49
E. none of the above

49. You have just purchased a 10-year zero-coupon bond with a yield to maturity of 10% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 11% at the time you sell.

A. 10.00%
B. 20.42%
C. 13.8%
D. 1.4%
E. none of the above

50. A Treasury bill with a par value of $100,000 due one month from now is selling today for $99,010. The effective annual yield is _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

51. A Treasury bill with a par value of $100,000 due two months from now is selling today for $98,039, with an effective annual yield of _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

52. A Treasury bill with a par value of $100,000 due three months from now is selling today for $97,087, with an effective annual yield of _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

53. A coupon bond pays interest semi-annually, matures in 5 years, has a par value of $1,000 and a coupon rate of 12%, and an effective annual yield to maturity of 10.25%. The price the bond should sell for today is _____.

A. $922.77
B. $924.16
C. $1,075.80
D. $1,077.20
E. none of the above

54. A convertible bond has a par value of $1,000 and a current market price of $850. The current price of the issuing firm's stock is $29 and the conversion ratio is 30 shares. The bond's market conversion value is _____.

A. $729
B. $810
C. $870
D. $1,000
E. none of the above

55. A convertible bond has a par value of $1,000 and a current market value of $850. The current price of the issuing firm's stock is $27 and the conversion ratio is 30 shares. The bond's conversion premium is _____.

A. $40
B. $150
C. $190
D. $200
E. none of the above

Consider the following $1,000 par value zero-coupon bonds:

Bond	Years to Maturity	Price
A	1	$909.09
B	2	$811.62
C	3	$711.78
D	4	$635.52

56. The yield to maturity on bond A is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

57. The yield to maturity on bond B is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

58. The yield to maturity on bond C is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

59. The yield to maturity on bond D is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

60. A 10% coupon bond, annual payments, 10 years to maturity is callable in 3 years at a call price of $1,100. If the bond is selling today for $975, the yield to call is _____.

A. 10.26%
B. 10.00%
C. 9.25%
D. 13.98%
E. none of the above

61. A 12% coupon bond, semiannual payments, is callable in 5 years. The call price is $1,120; if the bond is selling today for $1,110, what is the yield to call?

A. 12.03%.
B. 10.86%.
C. 10.95%.
D. 9.14%.
E. none of the above.

62. A 10% coupon, annual payments, bond maturing in 10 years, is expected to make all coupon payments, but to pay only 50% of par value at maturity. What is the expected yield on this bond if the bond is purchased for $975?

A. 10.00%.
B. 6.68%.
C. 11.00%.
D. 8.68%.
E. none of the above.

63. You purchased an annual interest coupon bond one year ago with 6 years remaining to maturity at the time of purchase. The coupon interest rate is 10% and par value is $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the bond's yield to maturity had changed to 7%, your annual total rate of return on holding the bond for that year would have been _____.

A. 7.00%
B. 8.00%
C. 9.95%
D. 11.95%
E. none of the above

64. The _____ is used to calculate the present value of a bond.

A. nominal yield
B. current yield
C. yield to maturity
D. yield to call
E. none of the above

65. 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.

66. A bond will sell at a discount when _____.

A. the coupon rate is greater than the current yield and the current yield is greater than yield to maturity
B. the coupon rate is greater than yield to maturity
C. the coupon rate is less than the current yield and the current yield is greater than the yield to maturity
D. the coupon rate is less than the current yield and the current yield is less than yield to maturity
E. none of the above are true.

67. Consider a 5-year bond with a 10% coupon that has a present yield to maturity of 8%. If interest rates remain constant, one year from now the price of this bond will be _____.

A. higher
B. lower
C. the same
D. cannot be determined
E. $1,000

68. A bond has a par value of $1,000, a time to maturity of 20 years, a coupon rate of 10% with interest paid annually, a current price of $850 and a yield to maturity of 12%. Intuitively and without the use calculations, if interest payments are reinvested at 10%, the realized compound yield on this bond must be _____.

A. 10.00%
B. 10.9%
C. 12.0%
D. 12.4%
E. none of the above

69. A bond with a 12% coupon, 10 years to maturity and selling at 88 has a yield to maturity of _____.

A. over 14%
B. between 13% and 14%
C. between 12% and 13%
D. between 10% and 12%
E. less than 12%

70. Using semiannual compounding, a 15-year zero coupon bond that has a par value of $1,000 and a required return of 8% would be priced at approximately _____.

A. $308
B. $315
C. $464
D. $555
E. none of the above

71. The yield to maturity of a 20-year zero coupon bond that is selling for $372.50 with a value at maturity of $1,000 is _____.

A. 5.1%
B. 8.8%
C. 10.8%
D. 13.4%
E. none of the above

72. Which one of the following statements about convertibles is **true**?

A. The longer the call protection on a convertible, the less the security is worth.
B. The more volatile the underlying stock, the greater the value of the conversion feature.
C The smaller the spread between the dividend yield on the stock and the yield-to-maturity on the bond, the
. more the convertible is worth.
D. The collateral that is used to secure a convertible bond is one reason convertibles are more attractive than the underlying stock.
E. Convertibles are not callable.

73. Which one of the following statements about convertibles is **false**?

A. The longer the call protection on a convertible, the less the security is worth.
B. The more volatile the underlying stock, the greater the value of the conversion feature.
C. The smaller the spread between the dividend yield on the stock and the yield-to-maturity on the bond, the more the convertible is worth.
D. The collateral that is used to secure a convertible bond is one reason convertibles are more attractive than the underlying stock.
E. A, C and D.

74. Consider a $1,000 par value 20-year zero coupon bond issued at a yield to maturity of 10%. If you buy that bond when it is issued and continue to hold the bond as yields decline to 9%, the imputed interest income for the first year of that bond is

A. zero.
B. $14.87.
C. $45.85.
D. $7.44.
E. none of the above.

75. The **bond indenture** includes

A. the coupon rate of the bond.
B. the par value of the bond.
C. the maturity date of the bond.
D. all of the above.
E. none of the above.

76. A Treasury bond quoted at 107:16 107:18 has a bid price of _____ and an asked price of _____.

A. $107.16, $107.18
B. $1,071.60, $1,071.80
C. $1,075.00, $1,075.63
D. $1,071.80, $1,071.60
E. $1,070.50, $1,070.56

77. Bearer bonds are

A. bonds traded without any record of ownership.
B. helpful to tax authorities in the enforcement of tax collection.
C. rare in the United States today.
D. all of the above.
E. both A and C.

78. Most corporate bonds are traded

A. on a formal exchange operated by the New York Stock Exchange.
B. by the issuing corporation.
C. over the counter by bond dealers linked by a computer quotation system.
D. on a formal exchange operated by the American Stock Exchange.
E. on a formal exchange operated by the Philadelphia Stock Exchange.

79. The process of retiring high-coupon debt and issuing new bonds at a lower coupon to reduce interest payments is called

A. deferral.
B. reissue.
C. repurchase.
D. refunding.
E. none of the above.

80. Convertible bonds

A. give their holders the ability to share in price appreciation of the underlying stock.
B. offer lower coupon rates than similar nonconvertible bonds.
C. offer higher coupon rates than similar nonconvertible bonds.
D. both A and B are true.
E. both A and C are true.

81. TIPS are

A. securities formed from the coupon payments only of government bonds.
B. securities formed from the principal payments only of government bonds.
C. government bonds with par value linked to the general level of prices.
D. government bonds with coupon rate linked to the general level of prices.
E. zero-coupon government bonds.

82. Altman's Z scores are assigned based on a firm's financial characteristics and are used to predict

A. required coupon rates for new bond issues.
B. bankruptcy risk.
C. the likelihood of a firm becoming a takeover target.
D. the probability of a bond issue being called.
E. none of the above.

83. When a bond indenture includes a sinking fund provision

A. firms must establish a cash fund for future bond redemption.
B. bondholders always benefit, because principal repayment on the scheduled maturity date is guaranteed.
C. bondholders may lose because their bonds can be repurchased by the corporation at below-market prices.
D. both A and B are true.
E. none of the above are true.

84. 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.

85. Collateralized bonds

A. rely on the general earning power of the firm for the bond's safety.
B. are backed by specific assets of the issuing firm.
C. are considered the safest assets of the firm.
D. all of the above are true.
E. both B and C are true.

86. Debt securities are often called fixed-income securities because

A. the government fixes the maximum rate that can be paid on bonds.
B. they are held predominantly by older people who are living on fixed incomes.
C. they pay a fixed amount at maturity.
D. they promise either a fixed stream of income or a stream of income determined by a specific formula.
E. they were the first type of investment offered to the public, which allowed them to "fix" their income at a higher level by investing in bonds.

87. A zero-coupon bond is one that

A. effectively has a zero percent coupon rate.
B. pays interest to the investor based on the general level of interest rates, rather than at a specified coupon rate.
C. pays interest to the investor without requiring the actual coupon to be mailed to the corporation.
D. is issued by state governments because they don't have to pay interest.
E. is analyzed primarily by focusing ("zeroing in") on the coupon rate.

88. Swingin' Soiree, Inc. is a firm that has its main office on the Right Bank in Paris. The firm just issued bonds with a final payment amount that depends on whether the Seine River floods. This type of bond is known as

A. a contingency bond
B. a catastrophe bond
C. an emergency bond
D. an incident bond
E. an eventuality bond

89. One year ago, you purchased a newly issued TIPS bond that has a 6% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 4.2%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $60.00, $1,000
B. $42.00, $1,042
C. $60.00, $1,042
D. $62.52, $1,042
E. $102.00, $1,000

90. Bond analysts might be more interested in a bond's yield to call if

A. the bond's yield to maturity is insufficient.
B. the firm has called some of its bonds in the past.
C. the investor only plans to hold the bond until its first call date.
D. interest rates are expected to rise.
E. interest rates are expected to fall.

91. What is the relationship between the price of a straight bond and the price of a callable bond?

A. The straight bond's price will be higher than the callable bond's price for low interest rates.
B. The straight bond's price will be lower than the callable bond's price for low interest rates.
C. The straight bond's price will change as interest rates change, but the callable bond's price will stay the same.
D. The straight bond and the callable bond will have the same price.
E. There is no consistent relationship between the two types of bonds.

92. Three years ago you purchased a bond for $974.69. The bond had three years to maturity, a coupon rate of 8%, paid annually, and a face value of $1,000. Each year you reinvested all coupon interest at the prevailing reinvestment rate shown in the table below. Today is the bond's maturity date. What is your realized compound yield on the bond?

Time	Prevailing Reinvestment Rate
0 (purchase date)	6.0%
1	7.2%
2	9.4%
3 (maturity date)	8.2%

A. 6.43%
B. 7.96%
C. 8.23%
D. 8.97%
E. 9.13%

93. Which of the following is **not** a type of international bond?

A. Samurai bonds
B. Yankee bonds
C. bulldog bonds
D. Elton bonds
E. All of the above are international bonds.

94. A coupon bond that pays interest annually has a par value of $1,000, matures in 6 years, and has a yield to maturity of 11%. The intrinsic value of the bond today will be _____ if the coupon rate is 7.5%.

A. $712.99
B. $851.93
C. $1,123.01
D. $886.28
E. $1,000.00

95. A coupon bond that pays interest annually has a par value of $1,000, matures in 8 years, and has a yield to maturity of 9%. The intrinsic value of the bond today will be _____ if the coupon rate is 6%.

A. $833.96
B. $620.92
C. $1,123.01
D. $886.28
E. $1,000.00

96. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 6 years, and has a yield to maturity of 9%. The intrinsic value of the bond today will be _____ if the coupon rate is 9%.

A. $922.78
B. $924.16
C. $1,075.80
D. $1,000.00
E. none of the above

97. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 11%. The intrinsic value of the bond today will be _____ if the coupon rate is 8.8%.

A. $922.78
B. $894.51
C. $1,075.80
D. $1,077.20
E. none of the above

98. A coupon bond that pays interest of $90 annually has a par value of $1,000, matures in 9 years, and is selling today at a $66 discount from par value. The yield to maturity on this bond is _____.

A. 9.00%
B. 10.15%
C. 11.25%
D. 12.32%
E. none of the above

99. A coupon bond that pays interest of $40 semi annually has a par value of $1,000, matures in 4 years, and is selling today at a $36 discount from par value. The yield to maturity on this bond is _____.

A. 8.69%
B. 9.09%
C. 10.43%
D. 9.76%
E. none of the above

100. 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

101. You purchased an annual interest coupon bond one year ago that had 9 years remaining to maturity at that time. The coupon interest rate was 10% and the par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the yield to maturity continued to be 8%, your annual total rate of return on holding the bond for that year would have been _____.

A. 8.00%
B. 7.82%
C. 7.00%
D. 11.95%
E. none of the above

102. Consider two bonds, F and G. Both bonds presently are selling at their par value of $1,000. Each pays interest of $90 annually. Bond F will mature in 15 years while bond G will mature in 26 years. If the yields to maturity on the two bonds change from 9% to 10%, _____.

A. both bonds will increase in value, but bond F will increase more than bond G
B. both bonds will increase in value, but bond G will increase more than bond F
C. both bonds will decrease in value, but bond F will decrease more than bond G
D. both bonds will decrease in value, but bond G will decrease more than bond F
E. none of the above

103. A zero-coupon bond has a yield to maturity of 12% and a par value of $1,000. If the bond matures in 18 years, the bond should sell for a price of _____ today.

A. 422.41
B. $501.87
C. $513.16
D. $130.04
E. none of the above

104. A zero-coupon bond has a yield to maturity of 11% and a par value of $1,000. If the bond matures in 27 years, the bond should sell for a price of _____ today.

A. $59.74
B. $501.87
C. $513.16
D. $483.49
E. none of the above

105. You have just purchased a 12-year zero-coupon bond with a yield to maturity of 9% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 10% at the time you sell.

A. 10.00%
B. 20.42%
C. -1.4%
D. 1.4%
E. none of the above

106. You have just purchased a 7-year zero-coupon bond with a yield to maturity of 11% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 9% at the time you sell.

A. 10.00%
B. 23.8%
C. 13.8%
D. 1.4%
E. none of the above

107. A convertible bond has a par value of $1,000 and a current market price of $975. The current price of the issuing firm's stock is $42 and the conversion ratio is 22 shares. The bond's market conversion value is _____.

A. $729
B. $924
C. $870
D. $1,000
E. none of the above

108. A convertible bond has a par value of $1,000 and a current market price of $1105. The current price of the issuing firm's stock is $20 and the conversion ratio is 35 shares. The bond's market conversion value is _____.

A. $700
B. $810
C. $870
D. $1,000
E. none of the above

109. A convertible bond has a par value of $1,000 and a current market value of $950. The current price of the issuing firm's stock is $22 and the conversion ratio is 40 shares. The bond's conversion premium is _____.

A. $40
B. $70
C. $190
D. $200
E. none of the above

110. A convertible bond has a par value of $1,000 and a current market value of $1150. The current price of the issuing firm's stock is $65 and the conversion ratio is 15 shares. The bond's conversion premium is _____.

A. $40
B. $150
C. $175
D. $200
E. none of the above

111. If a 7% coupon bond that pays interest every 182 days paid interest 32 days ago, the accrued interest would be

A. 5.67
B. 7.35
C. 6.35
D. 6.15
E. 7.12

112. If a 7.5% coupon bond that pays interest every 182 days paid interest 62 days ago, the accrued interest would be

A. 11.67
B. 12.35
C. 12.77
D. 11.98
E. 12.15

113. If a 9% coupon bond that pays interest every 182 days paid interest 112 days ago, the accrued interest would be

A. 27.69
B. 27.35
C. 26.77
D. 27.98
E. 28.15

114. A 7% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bond paid interest 32 days ago, the invoice price of the bond would be

A. 1,005.67
B. 1,007.35
C. 1,006.35
D. 1,006.15
E. 1,007.12

115. A 7.5% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bond paid interest 62 days ago, the invoice price of the bond would be

A. 1,011.67
B. 1,012.35
C. 1,012.77
D. 1,011.98
E. 1,012.15

116. A 9% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bind paid interest 112 days ago, the invoice price of the bond would be

A. 1,027.69
B. 1,027.35
C. 1,026.77
D. 1,027.98
E. 1,028.15

117. One year ago, you purchased a newly issued TIPS bond that has a 5% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 3.2%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $50.00, $1,000
B. $32.00, $1,032
C. $50.00, $1,032
D. $32.00, $1,050
E. $51.60, $1,032

118. One year ago, you purchased a newly issued TIPS bond that has a 4% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 3.6%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $40.00, $1,000
B. $41.44, $1,036
C. $40.00, $1,036
D. $36.00, $1,040
E. $76.00, $1,000

119. A CDO is a

A. Command Duty Officer
B. collateralized debt obligation
C. commercial debt originator
D. collateralized debenture originator
E. common debt officer

120. SIVs are

A. structured investment vehicles
B. structured interest rate vehicles
C. semi-annual investment vehicles
D. riskless investments
E. structured insured variable rate instruments

121. SIVs raise funds by _____ and then use the proceeds to _____.

A. issuing short-term commercial paper; retire other forms of their debt
B. issuing short-term commercial paper; buy other forms of debt such as mortgages
C. issuing long-term bonds; retire other forms of their debt
D. issuing long-term bonds; buy other forms of debt such as mortgages
E. A and D

122. CDOs are divided in tranches

A. that provide investors with securities with varying degrees of credit risk
B. and each tranch is given a different level of seniority in terms of its claims on the underlying pool
C. and none of the tranches are risky
D. and equity tranch is very low risk
E. A and B

123. Mortgage-backed CDOs were a disaster in 2007 because

A. they were formed by pooling high quality fixed-rated loans with low interest rates
B. they were formed by pooling sub-prime mortgages
C. home prices stalled
D. the mortgages were variable rate loans and interest rates increased
E. B, C, and D

124. If you are buying a coupon bond between interest paying dates, is the amount you would pay to your broker for the bond more or less than the amount quoted in the financial quotation pages? Discuss the differences and how these differences arise.

125. Discuss the taxation ramifications of zero coupon bonds. How has this taxation procedure changed over the years? How has this change affected the demand for these bonds?

126. Why are many bonds callable? What is the disadvantage to the investor of a callable bond? What does the investor receive in exchange for a bond being callable? How are bond valuation calculations affected if bonds are callable?

127. You purchased a zero-coupon bond that has a face value of $1,000, five years to maturity and a yield to maturity of 7.3%. It is one year later and similar bonds are offering a yield to maturity of 8.1%. You will sell the bond now. You have a tax rate of 40% on regular income and 15% on capital gains. Calculate the following for this bond.
    - the purchase price of the bond
    - the current price of the bond
    - the imputed interest income
    - the capital gain (or loss) on the bond
    - the before-tax rate of return on this investment
    - the after-tax rate of return on this investment

ch14 Key

1. The current yield on a bond is equal to _____.

A. annual interest divided by the current market price
B. the yield to maturity
C. annual interest divided by the par value
D. the internal rate of return
E. none of the above

A is current yield and is quoted as such in the financial press.

Bodie - Chapter 14 #1
Difficulty: Easy

2. If a 7% coupon bond is trading for $975.00, it has a current yield of _____ percent.

A. 7.00
B. 6.53
C. 7.24
D. 8.53
E. 7.18

70/975 = 7.18.

Bodie - Chapter 14 #2
Difficulty: Easy

3. If a 7.25% coupon bond is trading for $982.00, it has a current yield of _____ percent.

A. 7.38
B. 6.53
C. 7.25
D. 8.53
E. 7.18

72.50/982 = 7.38.

Bodie - Chapter 14 #3
Difficulty: Easy

4. If a 6.75% coupon bond is trading for $1016.00, it has a current yield of _____ percent.

A. 7.38
B. 6.64
C. 7.25
D. 8.53
E. 7.18

67.50/1016 = 6.6437.

Bodie - Chapter 14 #4
Difficulty: Easy

5. If a 7.75% coupon bond is trading for $1019.00, it has a current yield of _____ percent.

A. 7.38
B. 6.64
C. 7.25
D. 7.61
E. 7.18

77.50/1019 = 7.605.

Bodie - Chapter 14 #5
Difficulty: Easy

6. If a 6% coupon bond is trading for $950.00, it has a current yield of _____ percent.

A. 6.5
B. 6.3
C. 6.1
D. 6.0
E. 6.6

60/950 = 6.3.

Bodie - Chapter 14 #6
Difficulty: Easy

7. If an 8% coupon bond is trading for $1025.00, it has a current yield of _____ percent.

A. 7.8
B. 8.7
C. 7.6
D. 7.9
E. 8.1

80/1025 = 7.8.

Bodie - Chapter 14 #7
Difficulty: Easy

8. If a 7.5% coupon bond is trading for $1050.00, it has a current yield of _____ percent.

A. 7.0
B. 7.4
C. 7.1
D. 6.9
E. 6.7

75/1050 = 7.1.

Bodie - Chapter 14 #8
Difficulty: Easy

9. A coupon bond pays annual interest, has a par value of $1,000, matures in 4 years, has a coupon rate of 10%, and has a yield to maturity of 12%. The current yield on this bond is _____.

A. 10.65%
B. 10.45%
C. 10.95%
D. 10.52%
E. none of the above

FV = 1000, n = 4, PMT = 100, i = 12, PV = 939.25; $100 / $939.25 = 10.65%.

Bodie - Chapter 14 #9
Difficulty: Moderate

10. A coupon bond pays annual interest, has a par value of $1,000, matures in 4 years, has a coupon rate of 8.25%, and has a yield to maturity of 8.64%. The current yield on this bond is _____.

A. 8.65%
B. 8.45%
C. 7.95%
D. 8.36%
E. none of the above

FV = 1000, n = 4, PMT = 82.50, i = 8.64, PV = 987.26; $82.50 / $987.26 = 8.36%.

Bodie - Chapter 14 #10
Difficulty: Moderate

11. A coupon bond pays annual interest, has a par value of $1,000, matures in 12 years, has a coupon rate of 11%, and has a yield to maturity of 12%. The current yield on this bond is _____.

A. 10.39%
B. 10.43%
C. 10.58%
D. 10.66%
E. none of the above

FV = 1000, n = 12, PMT = 110, i = 12, PV = 938.06; $100 / $938.06 = 10.66%.

Bodie - Chapter 14 #11
Difficulty: Moderate

12. A coupon bond pays annual interest, has a par value of $1,000, matures in 12 years, has a coupon rate of 8.7%, and has a yield to maturity of 7.9%. The current yield on this bond is _____.

A. 8.39%
B. 8.43%
C. 8.83%
D. 8.66%
E. none of the above

FV = 1000, n = 12, PMT = 87, i = 8.9, PV = 985.61; $87 / $985.61 = 8.83%.

Bodie - Chapter 14 #12
Difficulty: Moderate

13. Of the following four investments, _____ is considered the safest.

A. commercial paper
B. corporate bonds
C. U.S. Agency issues
D. Treasury bonds
E. Treasury bills

Only Treasury issues are insured by the U.S. government; the shorter-term the instrument, the safer the instrument.

Bodie - Chapter 14 #13
Difficulty: Easy

14. Of the following four investments, _____ is considered the least risky.

A. Treasury bills
B. corporate bonds
C. U.S. Agency issues
D. Treasury bonds
E. commercial paper

Only Treasury issues are insured by the U.S. government; the shorter-term the instrument, the safer the instrument.

Bodie - Chapter 14 #14
Difficulty: Easy

15. To earn a high rating from the bond rating agencies, a firm should have

A. a low times interest earned ratio
B. a low debt to equity ratio
C. a high quick ratio
D. B and C
E. A and C

High values for the times interest and quick ratios and a low debt to equity ratio are desirable indicators of safety.

Bodie - Chapter 14 #15
Difficulty: Easy

16. A firm with a low rating from the bond rating agencies would have

A. a low times interest earned ratio
B. a low debt to equity ratio
C. a low quick ratio
D. B and C
E. A and C

High values for the times interest and quick ratios and a low debt to equity ratio are desirable indicators of safety.

Bodie - Chapter 14 #16
Difficulty: Easy

17. At issue, coupon bonds typically sell _____.

A. above par value
B. below par
C. at or near par value
D. at a value unrelated to par
E. none of the above

If the investment banker has appraised the market and the quality of the bond correctly, the bond will sell at or near par (unless interest rates have changed very dramatically and very quickly around the time of issuance).

Bodie - Chapter 14 #17
Difficulty: Easy

18. Accrued interest

A. is quoted in the bond price in the financial press.
B. must be paid by the buyer of the bond and remitted to the seller of the bond.
C. must be paid to the broker for the inconvenience of selling bonds between maturity dates.
D. A and B.
E. A and C.

Accrued interest must be paid by the buyer, but is not included in the quotations page price.

Bodie - Chapter 14 #18
Difficulty: Moderate

19. 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.

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

Bodie - Chapter 14 #19
Difficulty: Easy

20. An 8% coupon U.S. Treasury note pays interest on May 30 and November 30 and is traded for settlement on August 15. The accrued interest on the $100,000 face value of this note is _____.

A. $491.80
B. $800.00
C. $983.61
D. $1,661.20
E. none of the above

76/183($4,000) = $1,661.20. Approximation: .08/12 * 100,000 = 666.67 per month. 666.67/month * 2.5 months = 1.666.67.

Bodie - Chapter 14 #20
Difficulty: Moderate

21. 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 months 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

$1,080 + $7.5 (accrued interest) = $1,087.50.

Bodie - Chapter 14 #21
Difficulty: Moderate

22. A coupon bond is reported as having an ask price of 113% of the $1,000 par value in the Wall Street Journal. If the last interest payment was made two months ago and the coupon rate is 12%, the invoice price of the bond will be _____.

A. $1,100
B. $1,110
C. $1,150
D. $1,160
E. none of the above

$1,130 + $20 (accrued interest) = $1,150.

Bodie - Chapter 14 #22
Difficulty: Moderate

23. The bonds of Ford Motor Company have received a rating of "D" by Moody's. The "D" rating indicates

A. the bonds are insured
B. the bonds are junk bonds
C. the bonds are referred to as "high yield" bonds
D. A and B
E. B and C

D ratings are risky bonds, often called junk bonds (or high yield bonds by those marketing such bonds).

Bodie - Chapter 14 #23
Difficulty: Easy

24. The bond market

A. can be quite "thin".
B. primarily consists of a network of bond dealers in the over the counter market.
C. consists of many investors on any given day.
D. A and B.
E. B and C.

The bond market, unlike the stock market, can be a very thinly traded market. In addition, most bonds are traded by dealers.

Bodie - Chapter 14 #24
Difficulty: Easy

25. Ceteris paribus, the price and yield on a bond are

A. positively related.
B. negatively related.
C. sometimes positively and sometimes negatively related.
D. not related.
E. indefinitely related.

Bond prices and yields are inversely related.

Bodie - Chapter 14 #25
Difficulty: Easy

26. The _____ is a measure of the average rate of return an investor will earn if the investor buys the bond now and holds until maturity.

A. current yield
B. dividend yield
C. P/E ratio
D. yield to maturity
E. discount yield

The current yield is the annual interest as a percent of current market price; the other choices do not apply to bonds.

Bodie - Chapter 14 #26
Difficulty: Easy

27. The _____ gives the number of shares for which each convertible bond can be exchanged.

A. conversion ratio
B. current ratio
C. P/E ratio
D. conversion premium
E. convertible floor

The conversion premium is the amount for which the bond sells above conversion value; the price of bond as a straight bond provides the floor. The other terms are not specifically relevant to convertible bonds.

Bodie - Chapter 14 #27
Difficulty: Easy

28. A coupon bond is a bond that _____.

A. pays interest on a regular basis (typically every six months)
B. does not pay interest on a regular basis but pays a lump sum at maturity
C. can always be converted into a specific number of shares of common stock in the issuing company
D. always sells at par
E. none of the above

A coupon bond will pay the coupon rate of interest on a semiannual basis unless the firm defaults on the bond. Convertible bonds are specific types of bonds.

Bodie - Chapter 14 #28
Difficulty: Easy

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

A. callable
B. coupon
C. put
D. Treasury
E. zero-coupon

Any bond may be redeemed prior to maturity, but all bonds other than put bonds are redeemed at a price determined by the prevailing interest rates.

Bodie - Chapter 14 #29
Difficulty: Easy

30. Callable bonds

A. are called when interest rates decline appreciably.
B. have a call price that declines as time passes.
C. are called when interest rates increase appreciably.
D. A and B.
E. B and C.

Callable bonds often are refunded (called) when interest rates decline appreciably. The call price of the bond (approximately par and one year's coupon payment) declines to par as time passes and maturity is reached.

Bodie - Chapter 14 #30
Difficulty: Easy

31. A Treasury bond due in one year has a yield of 5.7%; a Treasury bond due in 5 years has a yield of 6.2%. A bond issued by Ford Motor Company due in 5 years has a yield of 7.5%; a bond issued by Shell Oil due in one year has a yield of 6.5%. The default risk premiums on the bonds issued by Shell and Ford, respectively, are

A. 1.0% and 1.2%
B. 0.7% and 1.5%
C. 1.2% and 1.0%
D. 0.8% and 1.3%
E. none of the above

Shell: 6.5% - 5.7% = .8%; Ford: 7.5% - 6.2% = 1.3%.

Bodie - Chapter 14 #31
Difficulty: Moderate

32. A Treasury bond due in one year has a yield of 4.6%; a Treasury bond due in 5 years has a yield of 5.6%. A bond issued by Lucent Technologies due in 5 years has a yield of 8.9%; a bond issued by Mobil due in one year has a yield of 6.2%. The default risk premiums on the bonds issued by Mobil and Lucent Technologies, respectively, are:

A. 1.6% and 3.3%
B. 0.5% and .7%
C. 3.3% and 1.6%
D. 0.7% and 0.5%
E. none of the above

Mobil: 6.2% - 4.6% = 1.6%; Lucent Technologies: 8.9% - 5.6% = 3.3%.

Bodie - Chapter 14 #32
Difficulty: Moderate

33. A Treasury bond due in one year has a yield of 6.2%; a Treasury bond due in 5 years has a yield of 6.7%. A bond issued by Xerox due in 5 years has a yield of 7.9%; a bond issued by Exxon due in one year has a yield of 7.2%. The default risk premiums on the bonds issued by Exxon and Xerox, respectively, are

A. 1.0% and 1.2%
B. 0.5% and .7%
C. 1.2% and 1.0%
D. 0.7% and 0.5%
E. none of the above

Exxon: 7.2% - 6.2% = 1.0%; Xerox: 7. 9% - 6.7% = 1.2%.

Bodie - Chapter 14 #33
Difficulty: Moderate

34. A Treasury bond due in one year has a yield of 4.3%; a Treasury bond due in 5 years has a yield of 5.06%. A bond issued by Boeing due in 5 years has a yield of 7.63%; a bond issued by Caterpillar due in one year has a yield of 7.16%. The default risk premiums on the bonds issued by Boeing and Caterpillar, respectively, are

A. 3.33% and 2.10%
B. 2.57% and 2.86%
C. 1.2% and 1.0%
D. 0.76% and 0.47%
E. none of the above

Boeing: 7.63% - 5.06% = 2.57%; Caterpillar: 7.16% - 4.30% = 2.86%.

Bodie - Chapter 14 #34
Difficulty: Moderate

35. Floating-rate bonds are designed to _____ while convertible bonds are designed to _____.

A. minimize the holders' interest rate risk; give the investor the ability to share in the price appreciation of the company's stock
B. maximize the holders' interest rate risk; give the investor the ability to share in the price appreciation of the company's stock
C. minimize the holders' interest rate risk; give the investor the ability to benefit from interest rate changes
D. maximize the holders' interest rate risk; give investor the ability to share in the profits of the issuing company
E. none of the above

Floating rate bonds allow the investor to earn a rate of interest income tied to current interest rates, thus negating one of the major disadvantages of fixed income investments. Convertible bonds allow the investor to benefit from the appreciation of the stock price, either by converting to stock or holding the bond, which will increase in price as the stock price increases.

Bodie - Chapter 14 #35
Difficulty: Moderate

36. A coupon bond that pays interest annually is selling at par value of $1,000, matures in 5 years, and has a coupon rate of 9%. The yield to maturity on this bond is:

A. 8.0%
B. 8.3%
C. 9.0%
D. 10.0%
E. none of the above

When a bond sells at par value, the coupon rate is equal to the yield to maturity.

Bodie - Chapter 14 #36
Difficulty: Easy

37. A coupon bond that pays interest semi-annually is selling at par value of $1,000, matures in 7 years, and has a coupon rate of 8.6%. The yield to maturity on this bond is:

A. 8.0%
B. 8.6%
C. 9.0%
D. 10.0%
E. none of the above

When a bond sells at par value, the coupon rate is equal to the yield to maturity.

Bodie - Chapter 14 #37
Difficulty: Easy

38. 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

FV = 1000, PMT = 70, n = 5, i = 10, PV = 886.28.

Bodie - Chapter 14 #38
Difficulty: Moderate

39. A coupon bond that pays interest annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 9.3%. The intrinsic value of the bond today will be _____ if the coupon rate is 8.5%.

A. $712.99
B. $960.14
C. $1,123.01
D. $886.28
E. $1,000.00

FV = 1000, PMT = 85, n = 7, i = 9.3, PV = 960.138.

Bodie - Chapter 14 #39
Difficulty: Moderate

40. 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 12%.

A. $922.77
B. $924.16
C. $1,075.82
D. $1,077.20
E. none of the above

FV = 1000, PMT = 120, n = 5, i = 10, PV = 1075.82

Bodie - Chapter 14 #40
Difficulty: Moderate

41. A coupon bond that pays interest semi-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 8%.

A. $922.78
B. $924.16
C. $1,075.80
D. $1,077.20
E. none of the above

FV = 1000, PMT = 40, n = 10, i = 5, PV = 922.78

Bodie - Chapter 14 #41
Difficulty: Moderate

42. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 9.3%. The intrinsic value of the bond today will be _____ if the coupon rate is 9.5%.

A. $922.77
B. $1,010.12
C. $1,075.80
D. $1,077.22
E. none of the above

FV = 1000, PMT = 47.50, n = 14, i = 4.65, PV = 1,010.12

Bodie - Chapter 14 #42
Difficulty: Moderate

43. A coupon bond that pays interest semi-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 12%.

A. $922.77
B. $924.16
C. $1,075.80
D. $1,077.22
E. none of the above

FV = 1000, PMT = 60, n = 10, i = 5, PV = 1077.22

Bodie - Chapter 14 #43
Difficulty: Moderate

44. 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

FV = 1000, PMT = 100, n = 5, PV = -928, i = 11.997%

Bodie - Chapter 14 #44
Difficulty: Moderate

45. You purchased an annual interest coupon bond one year ago that now has 6 years remaining until maturity. The coupon rate of interest was 10% and par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. The amount you paid for this bond one year ago was

A. $1,057.50.
B. $1,075.50.
C. $1,088.50.
D. $1.092.46.
E. $1,104.13.

FV = 1000, PMT = 100, n = 7, i = 8, PV = 1104.13

Bodie - Chapter 14 #45
Difficulty: Moderate

46. You purchased an annual interest coupon bond one year ago that had 6 years remaining to maturity at that time. The coupon interest rate was 10% and the par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the yield to maturity continued to be 8%, your annual total rate of return on holding the bond for that year would have been _____.

A. 7.00%
B. 7.82%
C. 8.00%
D. 11.95%
E. none of the above

FV = 1000, PMT = 100, n = 6, i = 8, PV = 1092.46; FV = 1000, PMT = 100, n = 5, i = 8, PV = 1079.85; HPR = (1079.85 - 1092.46 + 100) / 1092.46 = 8%

Bodie - Chapter 14 #46
Difficulty: Difficult

47. Consider two bonds, A and B. Both bonds presently are selling at their par value of $1,000. Each pays interest of $120 annually. Bond A will mature in 5 years while bond B will mature in 6 years. If the yields to maturity on the two bonds change from 12% to 10%, _____.

A. both bonds will increase in value, but bond A will increase more than bond B
B. both bonds will increase in value, but bond B will increase more than bond A
C. both bonds will decrease in value, but bond A will decrease more than bond B
D. both bonds will decrease in value, but bond B will decrease more than bond A
E. none of the above

The longer the maturity, the greater the price change when interest rates change.

Bodie - Chapter 14 #47
Difficulty: Moderate

48. A zero-coupon bond has a yield to maturity of 9% and a par value of $1,000. If the bond matures in 8 years, the bond should sell for a price of _____ today.

A. 422.41
B. $501.87
C. $513.16
D. $483.49
E. none of the above

$\$1,000/(1.09)^8 = \$501.87$

Bodie - Chapter 14 #48
Difficulty: Moderate

49. You have just purchased a 10-year zero-coupon bond with a yield to maturity of 10% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 11% at the time you sell.

A. 10.00%
B. 20.42%
C. 13.8%
D. 1.4%
E. none of the above

$1,000/(1.10)10 = $385.54; $1,000/(1.11)9 = $390.92; ($390.92 - $385.54)/$385.54 = 1.4%.

Bodie - Chapter 14 #49
Difficulty: Moderate

50. A Treasury bill with a par value of $100,000 due one month from now is selling today for $99,010. The effective annual yield is _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

$990/$99,010 = 0.01; $(1.01)^{12} - 1.0 = 12.68\%$.

Bodie - Chapter 14 #50
Difficulty: Moderate

51. A Treasury bill with a par value of $100,000 due two months from now is selling today for $98,039, with an effective annual yield of _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

$1,961/$98,039 = 0.02; $(1.02)^{6} - 1 = 12.62\%$.

Bodie - Chapter 14 #51
Difficulty: Moderate

52. A Treasury bill with a par value of $100,000 due three months from now is selling today for $97,087, with an effective annual yield of _____.

A. 12.40%
B. 12.55%
C. 12.62%
D. 12.68%
E. none of the above

$2,913/$97,087 = 0.03; $(1.03)^{4} - 1.00 = 12.55\%$.

Bodie - Chapter 14 #52
Difficulty: Moderate

53. A coupon bond pays interest semi-annually, matures in 5 years, has a par value of $1,000 and a coupon rate of 12%, and an effective annual yield to maturity of 10.25%. The price the bond should sell for today is _____.

A. $922.77
B. $924.16
C. $1,075.80
D. $1,077.20
E. none of the above

$(1.1025)^{1/2}$ - 1 = 5%, N = 10, I = 5%, PMT = 60, FV = 1000, ⇒PV = 1,077.22.

Bodie - Chapter 14 #53
Difficulty: Moderate

54. A convertible bond has a par value of $1,000 and a current market price of $850. The current price of the issuing firm's stock is $29 and the conversion ratio is 30 shares. The bond's market conversion value is _____.

A. $729
B. $810
C. $870
D. $1,000
E. none of the above

30 shares X $29/share = $870.

Bodie - Chapter 14 #54
Difficulty: Easy

55. A convertible bond has a par value of $1,000 and a current market value of $850. The current price of the issuing firm's stock is $27 and the conversion ratio is 30 shares. The bond's conversion premium is _____.

A. $40
B. $150
C. $190
D. $200
E. none of the above

$850 - $810 = $40.

Bodie - Chapter 14 #55
Difficulty: Moderate

Consider the following $1,000 par value zero-coupon bonds:

Bond	Years to Maturity	Price
A	1	$909.09
B	2	$811.62
C	3	$711.78
D	4	$635.52

56. The yield to maturity on bond A is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

($1,000 - $909.09)/$909.09 = 10%.

Bodie - Chapter 14 #56
Difficulty: Moderate

57. The yield to maturity on bond B is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

($1,000 - $811.62)/$811.62 = 0.2321; $(1.2321)^{1/2} - 1.0 = 11\%$.

Bodie - Chapter 14 #57
Difficulty: Moderate

58. The yield to maturity on bond C is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

($1,000 - $711.78)/$711.78 = 0.404928; $(1.404928)^{1/3} - 1.0 = 12\%$.

Bodie - Chapter 14 #58
Difficulty: Moderate

59. The yield to maturity on bond D is _____.

A. 10%
B. 11%
C. 12%
D. 14%
E. none of the above

($1,000 - $635.52)/$635.52 = 0.573515; $(1.573515)^{1/4} - 1.0 = 12\%$.

Bodie - Chapter 14 #59
Difficulty: Moderate

60. A 10% coupon bond, annual payments, 10 years to maturity is callable in 3 years at a call price of $1,100. If the bond is selling today for $975, the yield to call is _____.

A. 10.26%
B. 10.00%
C. 9.25%
D. 13.98%
E. none of the above

FV = 1100, n = 3, PMT = 100, PV = -975, i = 13.98%.

Bodie - Chapter 14 #60
Difficulty: Moderate

61. A 12% coupon bond, semiannual payments, is callable in 5 years. The call price is $1,120; if the bond is selling today for $1,110, what is the yield to call?

A. 12.03%.
B. 10.86%.
C. 10.95%.
D. 9.14%.
E. none of the above.

YTC = FV = 1120, n = 10, PMT = 60, PV = -1,110m Þi = 5.48%, 5.48 * 2 = 10.95

Bodie - Chapter 14 #61
Difficulty: Moderate

62. A 10% coupon, annual payments, bond maturing in 10 years, is expected to make all coupon payments, but to pay only 50% of par value at maturity. What is the expected yield on this bond if the bond is purchased for $975?

A. 10.00%.
B. 6.68%.
C. 11.00%.
D. 8.68%.
E. none of the above.

FV = 500, PMT = 100, n = 10, PV = -975, i = 6.68%

Bodie - Chapter 14 #62
Difficulty: Moderate

63. You purchased an annual interest coupon bond one year ago with 6 years remaining to maturity at the time of purchase. The coupon interest rate is 10% and par value is $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the bond's yield to maturity had changed to 7%, your annual total rate of return on holding the bond for that year would have been _____.

A. 7.00%
B. 8.00%
C. 9.95%
D. 11.95%
E. none of the above

FV = 1000, PMT = 100, n = 6, i = 8, PV = 1092.46; FV = 1000, PMT = 100, n = 5, i = 7, PV = 1123.01; HPR = (1123.01 - 1092.46 + 100) / 1092.46 = 11.95%.

Bodie - Chapter 14 #63
Difficulty: Difficult

64. The _____ is used to calculate the present value of a bond.

A. nominal yield
B. current yield
C. yield to maturity
D. yield to call
E. none of the above

Yield to maturity is the discount rate used in the bond valuation formula. For callable bonds, yield to call is sometimes the more appropriate calculation for the investor (if interest rates are expected to decrease).

Bodie - Chapter 14 #64
Difficulty: Easy

65. 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.

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

Bodie - Chapter 14 #65
Difficulty: Easy

66. A bond will sell at a discount when _____.

A. the coupon rate is greater than the current yield and the current yield is greater than yield to maturity
B. the coupon rate is greater than yield to maturity
C. the coupon rate is less than the current yield and the current yield is greater than the yield to maturity
D. the coupon rate is less than the current yield and the current yield is less than yield to maturity
E. none of the above are true.

In order for the investor to earn more than the current yield the bond must be selling for a discount. Yield to maturity will be greater than current yield as investor will have purchased the bond at discount and will be receiving the coupon payments over the life of the bond.

Bodie - Chapter 14 #66
Difficulty: Moderate

67. Consider a 5-year bond with a 10% coupon that has a present yield to maturity of 8%. If interest rates remain constant, one year from now the price of this bond will be _____.

A. higher
B. lower
C. the same
D. cannot be determined
E. $1,000

This bond is a premium bond as interest rates have declined since the bond was issued. If interest rates remain constant, the price of a premium bond declines as the bond approaches maturity.

Bodie - Chapter 14 #67
Difficulty: Moderate

68. A bond has a par value of $1,000, a time to maturity of 20 years, a coupon rate of 10% with interest paid annually, a current price of $850 and a yield to maturity of 12%. Intuitively and without the use calculations, if interest payments are reinvested at 10%, the realized compound yield on this bond must be _____.

A. 10.00%
B. 10.9%
C. 12.0%
D. 12.4%
E. none of the above

In order to earn yield to maturity, the coupons must be reinvested at the yield to maturity. However, as the bond is selling at discount the yield must be higher than the coupon rate. Therefore, B is the only possible answer.

Bodie - Chapter 14 #68
Difficulty: Difficult

69. A bond with a 12% coupon, 10 years to maturity and selling at 88 has a yield to maturity of _____.

A. over 14%
B. between 13% and 14%
C. between 12% and 13%
D. between 10% and 12%
E. less than 12%

YTM = 14.33%.

Bodie - Chapter 14 #69
Difficulty: Moderate

70. Using semiannual compounding, a 15-year zero coupon bond that has a par value of $1,000 and a required return of 8% would be priced at approximately _____.

A. $308
B. $315
C. $464
D. $555
E. none of the above

FV = 1000, n = 30, I = 4, PV = 308.32

Bodie - Chapter 14 #70
Difficulty: Moderate

71. The yield to maturity of a 20-year zero coupon bond that is selling for $372.50 with a value at maturity of $1,000 is _____.

A. 5.1%
B. 8.8%
C. 10.8%
D. 13.4%
E. none of the above

$[\$1,000/(\$372.50]^{1/20} - 1 = 5.1\%$.

Bodie - Chapter 14 #71
Difficulty: Moderate

72. Which one of the following statements about convertibles is **true**?

A. The longer the call protection on a convertible, the less the security is worth.
B. The more volatile the underlying stock, the greater the value of the conversion feature.
C. The smaller the spread between the dividend yield on the stock and the yield-to-maturity on the bond, the more the convertible is worth.
D. The collateral that is used to secure a convertible bond is one reason convertibles are more attractive than the underlying stock.
E. Convertibles are not callable.

The longer the call protection the more attractive the bond. The smaller the spread (c), the less the bond is worth. Convertibles are debentures (unsecured bonds). All convertibles are callable at the option of the issuer.

Bodie - Chapter 14 #72
Difficulty: Moderate

73. Which one of the following statements about convertibles is **false**?

A. The longer the call protection on a convertible, the less the security is worth.
B. The more volatile the underlying stock, the greater the value of the conversion feature.
C. The smaller the spread between the dividend yield on the stock and the yield-to-maturity on the bond, the more the convertible is worth.
D. The collateral that is used to secure a convertible bond is one reason convertibles are more attractive than the underlying stock.
E. A, C and D.

The longer the call protection the more attractive the bond. The smaller the spread (c), the less the bond is worth. Convertibles are debentures (unsecured bonds). All convertibles are callable at the option of the issuer.

Bodie - Chapter 14 #73
Difficulty: Moderate

74. Consider a $1,000 par value 20-year zero coupon bond issued at a yield to maturity of 10%. If you buy that bond when it is issued and continue to hold the bond as yields decline to 9%, the imputed interest income for the first year of that bond is

A. zero.
B. $14.87.
C. $45.85.
D. $7.44.
E. none of the above.

$\$1{,}000/(1.10)^{20} = \$148.64$; $\$1{,}000/(1.10)^{19} = \$163.51$; $\$194.49 - \$148.64 = \$14.87$.

Bodie - Chapter 14 #74
Difficulty: Moderate

75. The **bond indenture** includes

A. the coupon rate of the bond.
B. the par value of the bond.
C. the maturity date of the bond.
D. all of the above.
E. none of the above.

The bond indenture includes the coupon rate, par value and maturity date of the bond as well as any other contractual features.

Bodie - Chapter 14 #75
Difficulty: Easy

76. A Treasury bond quoted at 107:16 107:18 has a bid price of _____ and an asked price of _____.

A. $107.16, $107.18
B. $1,071.60, $1,071.80
C. $1,075.00, $1,075.63
D. $1,071.80, $1,071.60
E. $1,070.50, $1,070.56

Treasury bonds are quoted as a percentage of par value ($1,000) with the number after the colon representing the fractions of a point in 32nds. The bid price is quoted first and is the lower of the two.

Bodie - Chapter 14 #76
Difficulty: Moderate

77. Bearer bonds are

A. bonds traded without any record of ownership.
B. helpful to tax authorities in the enforcement of tax collection.
C. rare in the United States today.
D. all of the above.
E. both A and C.

Bearer bonds are not registered so there is no record of ownership. They are rare in the United States today. Tax authorities find registered bonds helpful in tax enforcement but not bearer bonds.

Bodie - Chapter 14 #77
Difficulty: Moderate

78. Most corporate bonds are traded

A. on a formal exchange operated by the New York Stock Exchange.
B. by the issuing corporation.
C. over the counter by bond dealers linked by a computer quotation system.
D. on a formal exchange operated by the American Stock Exchange.
E. on a formal exchange operated by the Philadelphia Stock Exchange.

Most corporate bonds are traded in a loosely organized network of bond dealers linked by a computer quote system. Only a small proportion is traded on the New York Exchange.

Bodie - Chapter 14 #78
Difficulty: Moderate

79. The process of retiring high-coupon debt and issuing new bonds at a lower coupon to reduce interest payments is called

A. deferral.
B. reissue.
C. repurchase.
D. refunding.
E. none of the above.

The process of refunding refers to calling high-coupon bonds and issuing new, lower coupon debt.

Bodie - Chapter 14 #79
Difficulty: Moderate

80. Convertible bonds

A. give their holders the ability to share in price appreciation of the underlying stock.
B. offer lower coupon rates than similar nonconvertible bonds.
C. offer higher coupon rates than similar nonconvertible bonds.
D. both A and B are true.
E. both A and C are true.

Convertible bonds offer appreciation potential through the ability to share in price appreciation of the underlying stock but offer a lower coupon and yield than similar nonconvertible bonds.

Bodie - Chapter 14 #80
Difficulty: Moderate

81. TIPS are

A. securities formed from the coupon payments only of government bonds.
B. securities formed from the principal payments only of government bonds.
C. government bonds with par value linked to the general level of prices.
D. government bonds with coupon rate linked to the general level of prices.
E. zero-coupon government bonds.

Treasury Inflation Protected Securities (TIPS) are bonds whose par value adjusts according to the general level of prices. This changes coupon payments, but not the stated coupon rate.

Bodie - Chapter 14 #81
Difficulty: Moderate

82. Altman's Z scores are assigned based on a firm's financial characteristics and are used to predict

A. required coupon rates for new bond issues.
B. bankruptcy risk.
C. the likelihood of a firm becoming a takeover target.
D. the probability of a bond issue being called.
E. none of the above.

Z-scores are used to predict significant bankruptcy risk.

Bodie - Chapter 14 #82
Difficulty: Easy

83. When a bond indenture includes a sinking fund provision

A. firms must establish a cash fund for future bond redemption.
B. bondholders always benefit, because principal repayment on the scheduled maturity date is guaranteed.
C. bondholders may lose because their bonds can be repurchased by the corporation at below-market prices.
D. both A and B are true.
E. none of the above are true.

A sinking fund provisions requires the firm to redeem bonds over several years, either by open market purchase or at a special call price from bondholders. This can result in repurchase in advance of scheduled maturity at below-market prices.

Bodie - Chapter 14 #83
Difficulty: Moderate

84. 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.

All of the statements correctly describe subordination clauses.

Bodie - Chapter 14 #84
Difficulty: Easy

85. Collateralized bonds

A. rely on the general earning power of the firm for the bond's safety.
B. are backed by specific assets of the issuing firm.
C. are considered the safest assets of the firm.
D. all of the above are true.
E. both B and C are true.

Collateralized bonds are considered the safest assets of the firm because they are backed by specific assets of the firm, rather than relying on the firm's general earning power.

Bodie - Chapter 14 #85
Difficulty: Easy

86. Debt securities are often called fixed-income securities because

A. the government fixes the maximum rate that can be paid on bonds.
B. they are held predominantly by older people who are living on fixed incomes.
C. they pay a fixed amount at maturity.
D. they promise either a fixed stream of income or a stream of income determined by a specific formula.
E. they were the first type of investment offered to the public, which allowed them to "fix" their income at a higher level by investing in bonds.

This definition is given in the chapter's introduction. It helps the student understand the nature of bonds.

Bodie - Chapter 14 #86
Difficulty: Easy

87. A zero-coupon bond is one that

A. effectively has a zero percent coupon rate.
B. pays interest to the investor based on the general level of interest rates, rather than at a specified coupon rate.
C. pays interest to the investor without requiring the actual coupon to be mailed to the corporation.
D. is issued by state governments because they don't have to pay interest.
E. is analyzed primarily by focusing ("zeroing in") on the coupon rate.

Zero-coupon bonds pay no interest. Investors receive the face value at maturity.

Bodie - Chapter 14 #87
Difficulty: Moderate

88. Swingin' Soiree, Inc. is a firm that has its main office on the Right Bank in Paris. The firm just issued bonds with a final payment amount that depends on whether the Seine River floods. This type of bond is known as

A. a contingency bond
B. a catastrophe bond
C. an emergency bond
D. an incident bond
E. an eventuality bond

Catastrophe bonds are used to transfer risk from the firm to the capital markets.

Bodie - Chapter 14 #88
Difficulty: Easy

89. One year ago, you purchased a newly issued TIPS bond that has a 6% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 4.2%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $60.00, $1,000
B. $42.00, $1,042
C. $60.00, $1,042
D. $62.52, $1,042
E. $102.00, $1,000

The bond price, which is indexed to the inflation rate, becomes $1,000 * 1.042 = $1,042. The interest payment is based on the coupon rate and the new face value. The interest amount equals $1,042 * .06 = $62.52.

Bodie - Chapter 14 #89
Difficulty: Moderate

90. Bond analysts might be more interested in a bond's yield to call if

A. the bond's yield to maturity is insufficient.
B. the firm has called some of its bonds in the past.
C. the investor only plans to hold the bond until its first call date.
D. interest rates are expected to rise.
E. interest rates are expected to fall.

If interest rates fall the firm is more likely to call the issue and refinance at lower rates. This is similar to an individual refinancing a home. The student has to think through each of the reasons given and make the connection between falling rates and the motivation to refinance.

Bodie - Chapter 14 #90
Difficulty: Difficult

91. What is the relationship between the price of a straight bond and the price of a callable bond?

A. The straight bond's price will be higher than the callable bond's price for low interest rates.
B. The straight bond's price will be lower than the callable bond's price for low interest rates.
C. The straight bond's price will change as interest rates change, but the callable bond's price will stay the same.
D. The straight bond and the callable bond will have the same price.
E. There is no consistent relationship between the two types of bonds.

For low interest rates, the price difference is due to the value of the firm's option to call the bond at the call price. The firm is more likely to call the issue at low interest rates, so the option is valuable. At higher interest rates the firm is less likely to call and this option loses value. The prices converge for high interest rates. A graphical representation is shown in Figure 14.4, page 463.

Bodie - Chapter 14 #91
Difficulty: Moderate

92. Three years ago you purchased a bond for $974.69. The bond had three years to maturity, a coupon rate of 8%, paid annually, and a face value of $1,000. Each year you reinvested all coupon interest at the prevailing reinvestment rate shown in the table below. Today is the bond's maturity date. What is your realized compound yield on the bond?

Time	Prevailing Reinvestment Rate
0 (purchase date)	6.0%
1	7.2%
2	9.4%
3 (maturity date)	8.2%

A. 6.43%
B. 7.96%
C. 8.23%
D. 8.97%
E. 9.13%

The investment grows to a total future value of $80 * (1.072) * (1.094) + $80 * (1.094) + $1,080 = $1,261.34 over the three year period. The realized compound yield is the yield that will compound the original investment to yield the same future value: $974.69 * $(1+rcy)^3$ = $1,261.34, $(1+rcy)^3$ = 1.29409, 1 + rcy = 1.0897, rcy = 8.97%.

Bodie - Chapter 14 #92
Difficulty: Difficult

93. Which of the following is **not** a type of international bond?

A. Samurai bonds
B. Yankee bonds
C. bulldog bonds
D. Elton bonds
E. All of the above are international bonds.

Samurai bonds, Yankee bonds, and bulldog bonds are mentioned in the textbook.

Bodie - Chapter 14 #93
Difficulty: Easy

94. A coupon bond that pays interest annually has a par value of $1,000, matures in 6 years, and has a yield to maturity of 11%. The intrinsic value of the bond today will be _____ if the coupon rate is 7.5%.

A. $712.99
B. $851.93
C. $1,123.01
D. $886.28
E. $1,000.00

FV = 1000, PMT = 75, n = 6, i = 11, PV = 851.93.

Bodie - Chapter 14 #94
Difficulty: Moderate

95. A coupon bond that pays interest annually has a par value of $1,000, matures in 8 years, and has a yield to maturity of 9%. The intrinsic value of the bond today will be _____ if the coupon rate is 6%.

A. $833.96
B. $620.92
C. $1,123.01
D. $886.28
E. $1,000.00

FV = 1000, PMT = 60, n = 8, i = 9, PV = 833.96

Bodie - Chapter 14 #95
Difficulty: Moderate

96. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 6 years, and has a yield to maturity of 9%. The intrinsic value of the bond today will be _____ if the coupon rate is 9%.

A. $922.78
B. $924.16
C. $1,075.80
D. $1,000.00
E. none of the above

FV = 1000, PMT = 45, n = 12, i = 4.5, PV = 1000.00

Bodie - Chapter 14 #96
Difficulty: Moderate

97. A coupon bond that pays interest semi-annually has a par value of $1,000, matures in 7 years, and has a yield to maturity of 11%. The intrinsic value of the bond today will be _____ if the coupon rate is 8.8%.

A. $922.78
B. $894.51
C. $1,075.80
D. $1,077.20
E. none of the above

FV = 1000, PMT = 44, n = 14, i = 5.5, PV = 894.51

Bodie - Chapter 14 #97
Difficulty: Moderate

98. A coupon bond that pays interest of $90 annually has a par value of $1,000, matures in 9 years, and is selling today at a $66 discount from par value. The yield to maturity on this bond is _____.

A. 9.00%
B. 10.15%
C. 11.25%
D. 12.32%
E. none of the above

FV = 1000, PMT = 90, n = 9, PV = -934, i = 10.15%

Bodie - Chapter 14 #98
Difficulty: Moderate

99. A coupon bond that pays interest of $40 semi annually has a par value of $1,000, matures in 4 years, and is selling today at a $36 discount from par value. The yield to maturity on this bond is _____.

A. 8.69%
B. 9.09%
C. 10.43%
D. 9.76%
E. none of the above

FV = 1000, PMT = 40, n = 8, PV = -964, i = 9.09%

Bodie - Chapter 14 #99
Difficulty: Moderate

100. 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

FV = 1000, PMT = 110, n = 19, i = 10, PV = 1,083.65

Bodie - Chapter 14 #100
Difficulty: Moderate

101. You purchased an annual interest coupon bond one year ago that had 9 years remaining to maturity at that time. The coupon interest rate was 10% and the par value was $1,000. At the time you purchased the bond, the yield to maturity was 8%. If you sold the bond after receiving the first interest payment and the yield to maturity continued to be 8%, your annual total rate of return on holding the bond for that year would have been _____.

A. 8.00%
B. 7.82%
C. 7.00%
D. 11.95%
E. none of the above

FV = 1000, PMT = 100, n = 9, i = 8, PV = 1124.94; FV = 1000, PMT = 100, n = 8, i = 8, PV = 1114.93; HPR = (1114.93 - 1124.94 + 100) / 1124.94 = 8%

Bodie - Chapter 14 #101
Difficulty: Difficult

102. Consider two bonds, F and G. Both bonds presently are selling at their par value of $1,000. Each pays interest of $90 annually. Bond F will mature in 15 years while bond G will mature in 26 years. If the yields to maturity on the two bonds change from 9% to 10%, _____.

A. both bonds will increase in value, but bond F will increase more than bond G
B. both bonds will increase in value, but bond G will increase more than bond F
C. both bonds will decrease in value, but bond F will decrease more than bond G
D. both bonds will decrease in value, but bond G will decrease more than bond F
E. none of the above

The longer the maturity, the greater the price change when interest rates change.

Bodie - Chapter 14 #102
Difficulty: Moderate

103. A zero-coupon bond has a yield to maturity of 12% and a par value of $1,000. If the bond matures in 18 years, the bond should sell for a price of _____ today.

A. 422.41
B. $501.87
C. $513.16
D. $130.04
E. none of the above

$\$1,000/(1.12)^{18} = \$130.04$

Bodie - Chapter 14 #103
Difficulty: Moderate

104. A zero-coupon bond has a yield to maturity of 11% and a par value of $1,000. If the bond matures in 27 years, the bond should sell for a price of _____ today.

A. $59.74
B. $501.87
C. $513.16
D. $483.49
E. none of the above

$1,000/(1.11)^27 = $59.74

Bodie - Chapter 14 #104
Difficulty: Moderate

105. You have just purchased a 12-year zero-coupon bond with a yield to maturity of 9% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 10% at the time you sell.

A. 10.00%
B. 20.42%
C. -1.4%
D. 1.4%
E. none of the above

$1,000/(1.09)^12 = $355.53; $1,000/(1.10)^11 = $350.49; ($350.49 - $355.53)/$355.53 = -1.4%.

Bodie - Chapter 14 #105
Difficulty: Moderate

106. You have just purchased a 7-year zero-coupon bond with a yield to maturity of 11% and a par value of $1,000. What would your rate of return at the end of the year be if you sell the bond? Assume the yield to maturity on the bond is 9% at the time you sell.

A. 10.00%
B. 23.8%
C. 13.8%
D. 1.4%
E. none of the above

$1,000/(1.11)^7 = $481.66; $1,000/(1.09)^6 = $596.27; ($596.27 - $481.66)/$481.66 = 23.8%.

Bodie - Chapter 14 #106
Difficulty: Moderate

107. A convertible bond has a par value of $1,000 and a current market price of $975. The current price of the issuing firm's stock is $42 and the conversion ratio is 22 shares. The bond's market conversion value is _____.

A. $729
B. $924
C. $870
D. $1,000
E. none of the above

22 shares X $42/share = $924.

Bodie - Chapter 14 #107
Difficulty: Easy

108. A convertible bond has a par value of $1,000 and a current market price of $1105. The current price of the issuing firm's stock is $20 and the conversion ratio is 35 shares. The bond's market conversion value is _____.

A. $700
B. $810
C. $870
D. $1,000
E. none of the above

35 shares X $20/share = $700.

Bodie - Chapter 14 #108
Difficulty: Easy

109. A convertible bond has a par value of $1,000 and a current market value of $950. The current price of the issuing firm's stock is $22 and the conversion ratio is 40 shares. The bond's conversion premium is _____.

A. $40
B. $70
C. $190
D. $200
E. none of the above

$950 - $880 = $70.

Bodie - Chapter 14 #109
Difficulty: Moderate

110. A convertible bond has a par value of $1,000 and a current market value of $1150. The current price of the issuing firm's stock is $65 and the conversion ratio is 15 shares. The bond's conversion premium is _____.

A. $40
B. $150
C. $175
D. $200
E. none of the above

$1150 - $975 = $175.

Bodie - Chapter 14 #110
Difficulty: Moderate

111. If a 7% coupon bond that pays interest every 182 days paid interest 32 days ago, the accrued interest would be

A. 5.67
B. 7.35
C. 6.35
D. 6.15
E. 7.12

$35 * (32/182) = $6.15

Bodie - Chapter 14 #111
Difficulty: Easy

112. If a 7.5% coupon bond that pays interest every 182 days paid interest 62 days ago, the accrued interest would be

A. 11.67
B. 12.35
C. 12.77
D. 11.98
E. 12.15

$37.5 * (62/182) = $12.77

Bodie - Chapter 14 #112
Difficulty: Easy

113. If a 9% coupon bond that pays interest every 182 days paid interest 112 days ago, the accrued interest would be

A. 27.69
B. 27.35
C. 26.77
D. 27.98
E. 28.15

$45 * (112/182) = $27.69

Bodie - Chapter 14 #113
Difficulty: Easy

114. A 7% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bond paid interest 32 days ago, the invoice price of the bond would be

A. 1,005.67
B. 1,007.35
C. 1,006.35
D. 1,006.15
E. 1,007.12

$1000 + [35 * (32/182)] = $1006.15

Bodie - Chapter 14 #114
Difficulty: Easy

115. A 7.5% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bond paid interest 62 days ago, the invoice price of the bond would be

A. 1,011.67
B. 1,012.35
C. 1,012.77
D. 1,011.98
E. 1,012.15

$1000 + [37.5 * (62/182)] = $1012.77

Bodie - Chapter 14 #115
Difficulty: Easy

116. A 9% coupon bond with an ask price of 100:00 pays interest every 182 days. If the bind paid interest 112 days ago, the invoice price of the bond would be

A. 1,027.69
B. 1,027.35
C. 1,026.77
D. 1,027.98
E. 1,028.15

$1,000 + [45 * (112/182)] = $1,027.69

Bodie - Chapter 14 #116
Difficulty: Easy

117. One year ago, you purchased a newly issued TIPS bond that has a 5% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 3.2%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $50.00, $1,000
B. $32.00, $1,032
C. $50.00, $1,032
D. $32.00, $1,050
E. $51.60, $1,032

The bond price, which is indexed to the inflation rate, becomes $1,000 * 1.032 = $1,032. The interest payment is based on the coupon rate and the new face value. The interest amount equals $1,032 * .05 = $51.60.

Bodie - Chapter 14 #117
Difficulty: Moderate

118. One year ago, you purchased a newly issued TIPS bond that has a 4% coupon rate, five years to maturity, and a par value of $1,000. The average inflation rate over the year was 3.6%. What is the amount of the coupon payment you will receive and what is the current face value of the bond?

A. $40.00, $1,000
B. $41.44, $1,036
C. $40.00, $1,036
D. $36.00, $1,040
E. $76.00, $1,000

The bond price, which is indexed to the inflation rate, becomes $1,000 * 1.036 = $1,036. The interest payment is based on the coupon rate and the new face value. The interest amount equals $1,036 * .04 = $41.44.

Bodie - Chapter 14 #118
Difficulty: Moderate

119. A CDO is a

A. Command Duty Officer
B. collateralized debt obligation
C. commercial debt originator
D. collateralized debenture originator
E. common debt officer

A CDO is a collateralized debt obligation.

Bodie - Chapter 14 #119
Difficulty: Easy

120. SIVs are

A. structured investment vehicles
B. structured interest rate vehicles
C. semi-annual investment vehicles
D. riskless investments
E. structured insured variable rate instruments

SIVs are structured interest rate vehicles.

Bodie - Chapter 14 #120
Difficulty: Moderate

121. SIVs raise funds by _____ and then use the proceeds to _____.

A. issuing short-term commercial paper; retire other forms of their debt
B. issuing short-term commercial paper; buy other forms of debt such as mortgages
C. issuing long-term bonds; retire other forms of their debt
D. issuing long-term bonds; buy other forms of debt such as mortgages
E. A and D

SIVs raise funds by issuing short-term commercial paper and then use the proceeds to buy other forms of debt such as mortgages.

Bodie - Chapter 14 #121
Difficulty: Moderate

122. CDOs are divided in tranches

A. that provide investors with securities with varying degrees of credit risk
B. and each tranch is given a different level of seniority in terms of its claims on the underlying pool
C. and none of the tranches are risky
D. and equity tranch is very low risk
E. A and B

Both A and B are correct.

Bodie - Chapter 14 #122
Difficulty: Moderate

123. Mortgage-backed CDOs were a disaster in 2007 because

A. they were formed by pooling high quality fixed-rated loans with low interest rates
B. they were formed by pooling sub-prime mortgages
C. home prices stalled
D. the mortgages were variable rate loans and interest rates increased
E. B, C, and D

Mortgage-backed CDOs were a disaster in 2007 because they were formed by pooling sub-prime mortgages, home prices stalled, the mortgages were variable rate loans and interest rates increased.

Bodie - Chapter 14 #123
Difficulty: Moderate

124. If you are buying a coupon bond between interest paying dates, is the amount you would pay to your broker for the bond more or less than the amount quoted in the financial quotation pages? Discuss the differences and how these differences arise.

If you are buying a bond between interest paying dates, you will pay more than the amount quoted in the financial pages. You will pay that price plus the interest that has accrued since the last interest paying date. That interest belongs to the seller of the bond and will be remitted to the seller by the broker. When the next interest paying date arrives, you will receive the entire coupon payment.
Feedback: The rationale for this question is be certain that the student understands the mechanism involved in the payment of interest on coupon bonds and the pricing of bonds.

Bodie - Chapter 14 #124
Difficulty: Easy

125. Discuss the taxation ramifications of zero coupon bonds. How has this taxation procedure changed over the years? How has this change affected the demand for these bonds?

The only return on a zero coupon bond is the capital gain realized when the bond is sold. Initially, the investor was required to pay capital gains tax only when the bond was sold. However, the IRS later decided that part of this capital gain each year was really imputed interest and thus now one must pay tax on this imputed interest income (income that the investor has not yet received). As a result, zero coupon bonds are no longer particularly attractive for individual investors and institutional investors subject to income tax. However, zeros remain attractive to institutional investors not subject to income taxes, such as pension plans and endowments.
Feedback: This question tests the depth of the student's understanding of the tax ramification of zero-coupon bonds.

Bodie - Chapter 14 #125
Difficulty: Moderate

126. Why are many bonds callable? What is the disadvantage to the investor of a callable bond? What does the investor receive in exchange for a bond being callable? How are bond valuation calculations affected if bonds are callable?

Many bonds are callable to give the issuer the option of calling the bond in and refunding (reissuing) the bond if interest rates decline. Bonds issued in a high interest rate environment will have the call feature. Interest rates must decline enough to offset the cost of floating a new issue. The disadvantage to the investor is that the investor will not receive that long stream of constant income that the bondholder would have received with a noncallable bond. In return, the yields on callable bonds are usually slightly higher than the yields on noncallable bonds of equivalent risk. When the bond is called, the investor receives the call price (an amount greater than par value). The bond valuation calculation should include the call price rather than the par value as the final amount received; also, only the cash flows until the first call should be discounted. The result is that the investor should be looking at yield to first call, not yield to maturity, for callable bonds.
Feedback: This question tests the student's understanding of callable bonds.

Bodie - Chapter 14 #126
Difficulty: Moderate

127. You purchased a zero-coupon bond that has a face value of $1,000, five years to maturity and a yield to maturity of 7.3%. It is one year later and similar bonds are offering a yield to maturity of 8.1%. You will sell the bond now. You have a tax rate of 40% on regular income and 15% on capital gains. Calculate the following for this bond.

- the purchase price of the bond
- the current price of the bond
- the imputed interest income
- the capital gain (or loss) on the bond
- the before-tax rate of return on this investment
- the after-tax rate of return on this investment

Calculations are shown in the table below.

Purchase Price of the Bond				
N=5	I=7.3	PMT=0	FV=1000	CPT PV=703.07
Current Price of the Bond				
N=4	I=8.1	PMT=0	FV=1000	CPT PV=732.31
Imputed Interest Income				
Find price at original YTM				
N=4	I=7.3	PMT=0	FV=1000	CPT PV=754.40
Change in price at original YTM = imputed interest income = $754.40 - $703.07 = $51.33				
Capital Gain (Loss)				
Change in price due to interest rate change = $732.31 - 754.40 = -$22.09				
Note: total change in price=imputed interest income + capital gain (loss) $732.31 - 703.07 = $29.24 = $51.33 - 22.09				
Before-tax Rate of Return				
($732.31 - 703.07)/$703.07 = 4.16%				
After-tax Rate of Return				
tax on imputed interest income=$51.33 * .4 = $20.53				
tax on capital gain (loss) = -$22.09 * .15 = -$3.31 (savings due to capital loss)				
After-tax return=($732.31 - 703.07 - 20.53 + 3.31)/$703.07 = 1.71%				

Feedback: This question tests the depth of the student's understanding of the concepts and mechanics of zero-coupon bonds.

Bodie - Chapter 14 #127
Difficulty: Difficult

ch14 Summary

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