# c2

*Student:* ___________________________________________________________________

1. Which of the following is **not** a characteristic of a money market instrument?

A. liquidity

B. marketability

C. long maturity

D. liquidity premium

E. **c** and **d**

2. Which one of the following is **not** a money market instrument?

A. a Treasury bill

B. a negotiable certificate of deposit

C. commercial paper

D. a Treasury bond

E. a Eurodollar account

3. T-bills are financial instruments initially sold by ________ to raise funds.

A. chartered banks

B. the federal government

C. state and local governments

D. agencies of the federal government

E. **b** and **d**

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4. Treasury Inflation-Protected Securities (TIPS)

A. pay a fixed interest rate for life.

B. pay a variable interest rate that is indexed to inflation.

C. provide a constant stream of income in real (inflation-adjusted) dollars.

D. have their principal adjusted in proportion to the Consumer Price Index.

E. provide a constant stream of income in real (inflation-adjusted) dollars and have their principal adjusted in proportion to the Consumer Price Index.

5. The bid price of a T-bill in the secondary market is

A. the price at which the dealer in T-bills is willing to sell the bill.

B. the price at which the dealer in T-bills is willing to buy the bill.

C. greater than the asked price of the T-bill.

D. the price at which the investor can buy the T-bill

E. never quoted in the financial press.

6. Commercial paper is a short-term security issued by ________ to raise funds.

A. the Bank of Canada

B. commercial banks

C. large, well-known companies

D. the Toronto Stock Exchange

E. provincial and local governments

7. You sold a futures contract on oats at a futures price of 233.75 and at the time of expiration the price was 261.25. What was your profit or loss?

   A. $1375.00
   B. -$1375.00
   C. -$27.50
   D. $27.50
   E. $1325.00

8. Which one of the following terms **best** describes Eurodollars:

   A. dollar-denominated deposits in European banks.
   B. dollar-denominated deposits at branches of foreign banks in the U. S.
   C. dollar-denominated deposits at foreign banks and branches of American banks outside the U. S.
   D. dollar-denominated deposits at American banks in the U. S.
   E. dollars that have been exchanged for European currency.

9. Eurodollars have the following characteristics:

   A. They are dollar-denominated deposits in foreign banks
   B. They are not subject to Regulation Q.
   C. They are in banks exempt from U. S. reserve requirements.
   D. They earn tax-free income.
   E. **a**, **b**, and **c**

10. Which ones of the following statements are true?

A. Most Canadian Certificates of Deposit (CDs) are marketable

B. Marketable CDs are issued at greater than $100,000 denominations

C. Bearer Deposit Notes are marketable CDs

D. Canadian CDs may be callable

E. CDs are identical instruments in Canada and the US.

F. Both B and C

11. Which one of the following statements is true?

A. at issuance, Treasury note maturities range up to 10 years

B. at issuance, Treasury bond maturities range up to 10 years

C. at issuance, Treasury note maturities range from 10 to 30 years

D. Treasury notes may be callable

E. at issuance, Treasury bill maturities range up to 10 years.

12. Which of the following statements is(are) true regarding municipal bonds?

I. A municipal bond is a debt obligation issued by state or local governments.

II. A municipal bond is a debt obligation issued by the federal government.

III. The interest income from a municipal bond is exempt from federal income taxation.

IV. The interest income from a municipal bond is exempt from state and local taxation in the issuing state.

A. I and II only

B. I and III only

C. I, II, and III only

D. I, III, and IV only

E. I and IV only

13. Which of the following statements is **true** regarding a corporate bond?

A. A corporate callable bond gives the holder the right to exchange it for a specified number of the company's common shares.

B. A corporate debenture is a secured bond.

C. A corporate indenture is a secured bond.

D. A corporate convertible bond gives the holder the right to exchange the bond for a specified number of the company's common shares.

E. Holders of corporate bonds have voting rights in the company.

14. In the event of the firm's bankruptcy

A. the most shareholders can lose is their original investment in the firm's stock.

B. common shareholders are the first in line to receive their claims on the firm's assets.

C. bondholders have claim to what is left from the liquidation of the firm's assets after paying the shareholders.

D. the claims of preferred shareholders are honored before those of the common shareholders.

E. **a** and **d**.

15. Which of the following is **true** regarding a firm's securities?

A. Common dividends are paid before preferred dividends.

B. Preferred stockholders have voting rights.

C. Preferred dividends are usually cumulative.

D. Preferred dividends are contractual obligations.

E. Common dividends usually can be paid if preferred dividends have been skipped.

16. Which of the following is **true** of the Dow Jones Industrial Average?

A. It is a value-weighted average of 30 large industrial stocks.

B. It is a price-weighted average of 30 large industrial stocks.

C. The divisor must be adjusted for stock splits.

D. **a** and **c**.

E. **b** and **c**.

17. Which of the following indices is(are) market-value weighted?

I) The S&P/TSX Composite Index.

II) The Standard and Poor's Composite 500-Stock Index Response

III) The Dow Jones Industrial Average.

A. I only

B. I and II only

C. I and III only

D. I, II, and III

E. II and III only

18. The Dow Jones Industrial Average (DJIA) is computed by:

A. adding the prices of 30 large "blue-chip" stocks and dividing by 30.

B. calculating the total market value of the 30 firms in the index and dividing by 30.

C. adding the prices of the 30 stocks in the index and dividing by a divisor.

D. adding the prices of the 500 stocks in the index and dividing by a divisor.

E. adding the prices of the 30 stocks in the index and dividing by the value of these stocks as of some base date period.

19. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
|---|---|---|
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

The price-weighted index constructed with the three stocks is

A. 30

B. 40

C. 50

D. 60

E. 70

20. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
|---|---|---|
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

The value-weighted index constructed with the three stocks using a divisor of 100 is

A. 1.2

B. 1200

C. 490

D. 4900

E. 49

21. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
|---|---|---|
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

Assume at these prices the value-weighted index constructed with the three stocks is 490. What would the index be if stock B is split 2 for 1 and stock C 4 for 1?

A. 265

B. 430

C. 355

D. 490

E. 1000

22. The asked bank discount yield on a T-bill is 5 percent. What is the asked price of the bill if it matures in 60 days and has a face value of $10,000?

A. $9,500.00

B. $9,916.67

C. $9,523.81

D. $8,753.14

E. $9,876.52

23. A T-bill has a face value of $10,000 and is selling for $9,800. If the T-bill matures in 90 days, what is its effective annual yield?

A. 8.16%.

B. 2.04%.

C. 8.54%.

D. 6.12%.

E. 8.42%

24. The price quotations of Canada bonds show an ask price of 104:08 (i.e. 104 and 8/32) and a bid price of 104:04. As a buyer of the bond what is the dollar price you expect to pay?

A. $10,480.00

B. $10,425.00

C. $10,440.00

D. $10,412.50

E. $10,404.00

25. An investor purchases one municipal and one corporate bond that pay rates of return of 8% and 10%, respectively. If the investor is in the 20% marginal tax bracket, his or her after tax rates of return on the municipal and corporate bonds would be ________ and ______, respectively.

A. 8% and 10%

B. 8% and 8%

C. 6.4% and 8%

D. 6.4% and 10%

E. 10% and 10%

26. If a U.S. Treasury note has a bid price of $975, the quoted bid price in the Wall Street Journal would be

A. 97:50

B. 97:16

C. 97:80

D. 94:24

E. 97:75

27. If a Treasury note has a bid price of $995, the quoted bid price would be

A. 9:50.

B. 99:16.

C. 9:80.

D. 9:24.

E. 9:32.

28. In calculating the Standard and Poor's stock price indices, the adjustment for stock split occurs:

A. by adjusting the divisor.

B. automatically.

C. by adjusting the numerator.

D. quarterly, on the last trading day of each quarter.

E. none of these.

29. Which of the following statements regarding the Dow Jones Industrial Average (DJIA) is **false**?

A. The DJIA is not very representative of the market as a whole.

B. The DJIA consists of 30 blue chip stocks.

C. The DJIA is affected equally by changes in low and high priced stocks.

D. The DJIA divisor needs to be adjusted for stock splits.

E. The value of the DJIA is much higher than individual stock prices.

30. The index that includes the largest number of actively traded stock is:

A. the NASDAQ Composite Index.

B. the NYSE Composite Index.

C. the Wilshire 5000 Index.

D. the Value Line Composite Index.

E. the Russell Index.

31. If the market prices of each of the 30 stocks in the Dow Jones Industrial Average (DJIA) all change by the same percentage amount during a given day, which stock will have the greatest impact on the DJIA?

A. The stock trading at the highest dollar price per share.

B. The stock with total equity has the higher market value.

C. The stock having the greatest amount of equity in its capital structure.

D. The stock having the lowest volatility.

E. All will have an equal impact.

32. A 5.5% 20-year municipal bond is currently priced to yield 7.2%. For a taxpayer in the 33% marginal tax bracket, this bond would offer an equivalent taxable yield of:

A. 8.20%.

B. 10.75%.

C. 11.40%.

D. 4.82%.

E. none of these.

33. The Value Line Index is an equally weighted geometric average of the return of about 1,700 firms. What is the value of an index based on the geometric average returns of three stocks, where the returns on the three stocks during a given period were 20%, -10%, and 5%?

A. 4.3%

B. 5.0%

C. 11.7%

D. 13.4%

E. 12.2%

34. The stocks on the Dow Jones Industrial Average

A. have remained unchanged since the creation of the index.

B. include most of the stocks traded on the NYSE.

C. are changed occasionally as circumstances dictate.

D. consist of stocks on which the investor cannot lose money.

E. b and c.

35. Brokers' calls

A. are funds used by individuals who wish to buy stocks on margin.

B. are funds borrowed by the broker from the bank, with the agreement to repay the bank immediately if requested to do so.

C. carry a rate that is usually about one percentage point lower than the rate on U.S. T-bills.

D. a and b.

E. a and c.

36. A form of short-term borrowing by dealers in government securities is

A. reserve requirements.

B. repurchase agreements

C. banker's acceptances.

D. commercial paper.

E. brokers' calls.

37. Which of the following securities is a money market instrument?

A. Treasury note

B. Treasury bond.

C. municipal bond.

D. commercial paper.

E. mortgage security.

38. The call provision in Canada securities

I) is used with Canada Bills.

II) is used with Canada Bonds.

III) gives the issuer the right to repurchase the security at par.

IV gives the issuer the right to repurchase the security at a premium over par.

A. II and III are correct.

B. II and IV are correct.

C. I, II and III are correct.

D. I, II and IV are correct.

E. Only II is correct.

39. The yield to maturity reported in the financial pages for Treasury securities

A. is calculated by compounding the semiannual yield.

B. is calculated by doubling the semiannual yield.

C. is also called the bond equivalent yield.

D. is calculated as the yield-to-call for premium bonds.

E. Both **b** and **c** are true.

40. As a taxpayer, in order for you to be indifferent between the after tax returns on a corporate bond paying 8.5% and a tax-exempt municipal bond paying 6.12%, what would your tax bracket need to be?

A. 33%

B. 72%

C. 15%

D. 28%

E. Cannot tell from the information given

41. For a taxpayer in the 25% marginal tax bracket, a 20-year municipal bond currently yielding 5.5% would offer an equivalent taxable yield of:

A. 7.33%.

B. 10.75%.

C. 5.5%.

D. 4.125%.

E. 6.45%.

42. Which of the following are true about Treasury Bills?

I) T-Bills are capital market instruments.

II) T-Bills sell through both competitive and noncompetitive bids.

III) T-Bill yields are quoted in the financial pages as effective annual rates of return.

IV) At the T-Bill's maturity, the holder receives the face value of the Bill.

A. I and II

B. II, III, and IV

C. I, II, and IV

D. II and III

E. II and IV

43. At what price could an investor purchase the following T-Bill?

| Days to Maturity | Bid | Asked | Chg. | Ask Yield |
|---|---|---|---|---|
| 58 | 6.01 | 5.97 | +0.01 | 6.11 |

A. $9,897.16

B. $9,903.17

C. $9,903.82

D. $9,901.56

E. $9,905.43

44. What is the bond equivalent yield of a T-Bill that is selling for $9,453 and has 173 days remaining until maturity?

A. 11.54%

B. 12.21%

C. 12.04%

D. 11.38%

E. 12.15%

45. What does the term "negotiable" mean with regard to negotiable certificates of deposit?

A. The CD can be sold to another investor if the owner needs to cash it in before its maturity date.

B. The rate of interest on the CD is subject to negotiation.

C. The CD is automatically reinvested at its maturity date.

D. The CD has staggered maturity dates built in.

E. The interest rate paid on the CD will vary with a designated market rate.

46. The Canada Mortgage and Housing Corporation provides

A. a primary market for mortgage transactions.

B. liquidity for the mortgage market.

C. a primary market for farm loan transactions.

D. liquidity for the farm loan market.

E. a source of funds for government agencies.

47. Suppose an investor is considering a corporate bond with a 7.17% before-tax yield and a municipal bond with a 5.93% before-tax yield. At what marginal tax rate would the investor be indifferent between investing in the corporate and investing in the municipal?

A. 15.4%

B. 23.7%

C. 39.5%

D. 17.3%

E. 12.4%

48. Which of the following are characteristics of preferred stock?

I) It pays its holder a fixed amount of income each year, at the discretion of its managers.

II) It gives its holder voting power in the firm.

III) Its dividends are usually cumulative.

IV) Failure to pay dividends may result in bankruptcy proceedings.

A. I, III, and IV

B. I, II, and III

C. I and III

D. I, II, and IV

E. I, II, III, and IV

49. Bond market indexes can be difficult to construct because

A. they cannot be based on firms' market values.

B. bonds tend to trade infrequently, making price information difficult to obtain.

C. there are so many different kinds of bonds.

D. prices cannot be obtained for companies that operate in emerging markets.

E. corporations are not required to disclose the details of their bond issues.

50. With regard to a futures contract, the long position is held by

A. the trader who bought the contract at the largest discount.

B. the trader who has to travel the farthest distance to deliver the commodity.

C. the trader who plans to hold the contract open for the lengthiest time period.

D. the trader who commits to purchasing the commodity on the delivery date.

E. the trader who commits to delivering the commodity on the delivery date.

51. With regard to a futures contract, the short position is held by

A. the trader who bought the contract at the largest discount.

B. the trader who has to travel the farthest distance to deliver the commodity.

C. the trader who plans to hold the contract open for the lengthiest time period.

D. the trader who commits to purchasing the commodity on the delivery date.

E. the trader who commits to delivering the commodity on the delivery date.

52. Distinguish between Federal Government debt and Federal Crown Corporation debt.

53. Discuss the advantages and disadvantages of common stock ownership, relative to other investment alternatives.

54. The Dow Jones Industrial Average, the New York Stock Exchange Index, and the Value Line Index have unique characteristics. Discuss how these indices are calculated and any problems/advantages associated with the specific indices.

| | $P_0$ | $Q_0$ | $P_1$ | $Q_1$ | $P_2$ | $Q_2$ |
|---|---|---|---|---|---|---|
| **Stock A** | $70 | 200 | $72 | 200 | $36 | 400 |
| **Stock B** | $85 | 500 | $81 | 500 | $81 | 500 |
| **Stock C** | $105 | 300 | $98 | 300 | $98 | 300 |

55. Based on the information given, for a price-weighted index of the three stocks calculate:

a. the rate of return for the first period (t = 0 to t = 1).

b. the value of the divisor in the second period (t = 2). Assume that Stock A had a 2-1 split during this period.

c. the rate of return for the second period (t = 1 to t = 2).

56. Based on the information given for the three stocks, calculate the first-period rates of return (from t = 0 to t = 1) on

a. a market-value-weighted index.

b. an equally-weighted index

c. a geometric index

# c2 Key

1. Which of the following is **not** a characteristic of a money market instrument?

A. liquidity

B. marketability

C. long maturity

D. liquidity premium

**E.** **c** and **d**

Money market instruments are short term instruments with high liquidity and marketability; they do not have long maturities nor pay liquidity premiums.

*Bodie - Chapter 02 #1*

*Chapter 02*

*Difficulty: Easy*

2. Which one of the following is **not** a money market instrument?

A. a Treasury bill

B. a negotiable certificate of deposit

C. commercial paper

**D.** a Treasury bond

E. a Eurodollar account

Money market instruments are instruments with maturities of one year or less, which applies to all of the above except Treasury bonds. See Table 2.1.

*Bodie - Chapter 02 #2*

3. T-bills are financial instruments initially sold by ________ to raise funds.

A. chartered banks

**B.** the federal government

C. state and local governments

D. agencies of the federal government

E. **b** and **d**

Only the federal government sells T-bills in the primary market.

*Bodie - Chapter 02 #3*
*Chapter 02*
*Difficulty: Easy*

4. Treasury Inflation-Protected Securities (TIPS)

A. pay a fixed interest rate for life.

B. pay a variable interest rate that is indexed to inflation.

C. provide a constant stream of income in real (inflation-adjusted) dollars.

D. have their principal adjusted in proportion to the Consumer Price Index.

**E.** provide a constant stream of income in real (inflation-adjusted) dollars and have their principal adjusted in proportion to the Consumer Price Index.

TIPS provide a constant stream of income in real (inflation-adjusted) dollars because their principal is adjusted in proportion to the Consumer Price Index.

*Bodie - Chapter 02 #4*
*Chapter 02*
*Difficulty: Easy*

5. The bid price of a T-bill in the secondary market is

A. the price at which the dealer in T-bills is willing to sell the bill.

**B.** the price at which the dealer in T-bills is willing to buy the bill.

C. greater than the asked price of the T-bill.

D. the price at which the investor can buy the T-bill

E. never quoted in the financial press.

T-bills are sold in the secondary market via dealers; the bid price quoted in the financial press is the price at which the dealer is willing to buy the bill.

*Bodie - Chapter 02 #5*
*Chapter 02*
*Difficulty: Easy*

6. Commercial paper is a short-term security issued by ________ to raise funds.

A. the Bank of Canada

B. commercial banks

**C.** large, well-known companies

D. the Toronto Stock Exchange

E. provincial and local governments

Commercial paper is short-term unsecured financing issued directly by large, presumably safe corporations.

*Bodie - Chapter 02 #6*
*Chapter 02*
*Difficulty: Easy*

7. You sold a futures contract on oats at a futures price of 233.75 and at the time of expiration the price was 261.25. What was your profit or loss?

A. $1375.00

**B.** -$1375.00

C. -$27.50

D. $27.50

E. $1325.00

There are 5,000 bushels per contract and prices are quoted in cents per bushel. Thus, your loss was ($2.3375 - $2.6125) = -$0.275 per bushel, or - $0.275 * 5,000 = -$1,375.

*Bodie - Chapter 02 #7*
*Chapter 02*
*Difficulty: Easy*

8. Which one of the following terms **best** describes Eurodollars:

A. dollar-denominated deposits in European banks.

B. dollar-denominated deposits at branches of foreign banks in the U. S.

**C.** dollar-denominated deposits at foreign banks and branches of American banks outside the U. S.

D. dollar-denominated deposits at American banks in the U. S.

E. dollars that have been exchanged for European currency.

Although originally Eurodollars were used to describe dollar-denominated deposits in European banks, today the term has been extended to apply to any dollar-denominated deposit outside the U. S.

*Bodie - Chapter 02 #8*
*Chapter 02*
*Difficulty: Moderate*

9. Eurodollars have the following characteristics:

A. They are dollar-denominated deposits in foreign banks

B. They are not subject to Regulation Q.

C. They are in banks exempt from U. S. reserve requirements.

D. They earn tax-free income.

**E.** **a**, **b**, and **c**

Characteristics a, b, and c apply to Eurodollars. See section in text.

*Bodie - Chapter 02 #9*

*Chapter 02*

*Difficulty: Easy*

10. Which ones of the following statements are true?

A. Most Canadian Certificates of Deposit (CDs) are marketable

B. Marketable CDs are issued at greater than $100,000 denominations

C. Bearer Deposit Notes are marketable CDs

D. Canadian CDs may be callable

E. CDs are identical instruments in Canada and the US.

**F.** Both B and C

*Bodie - Chapter 02 #10*

*Chapter 02*

*Difficulty: Easy*

11. Which one of the following statements is true?

**A.** at issuance, Treasury note maturities range up to 10 years

B. at issuance, Treasury bond maturities range up to 10 years

C. at issuance, Treasury note maturities range from 10 to 30 years

D. Treasury notes may be callable

E. at issuance, Treasury bill maturities range up to 10 years.

At issuance, the maturity of Treasury bonds is 10-30 years, notes up to ten years, and bills up to one year. Only maturities differentiate notes from bonds.

*Bodie - Chapter 02 #11*

*Chapter 02*

*Difficulty: Easy*

12. Which of the following statements is(are) true regarding municipal bonds?

I. A municipal bond is a debt obligation issued by state or local governments.

II. A municipal bond is a debt obligation issued by the federal government.

III. The interest income from a municipal bond is exempt from federal income taxation.

IV. The interest income from a municipal bond is exempt from state and local taxation in the issuing state.

A. I and II only

B. I and III only

C. I, II, and III only

**D.** I, III, and IV only

E. I and IV only

State and local governments and agencies thereof issue municipal bonds on which the interest income is free from all federal taxes and is exempt from state and local taxation in the issuing state.

*Bodie - Chapter 02 #12*

*Chapter 02*

*Difficulty: Moderate*

13. Which of the following statements is **true** regarding a corporate bond?

A. A corporate callable bond gives the holder the right to exchange it for a specified number of the company's common shares.

B. A corporate debenture is a secured bond.

C. A corporate indenture is a secured bond.

**D.** A corporate convertible bond gives the holder the right to exchange the bond for a specified number of the company's common shares.

E. Holders of corporate bonds have voting rights in the company.

Statement **d** is the only true statement; all other statements describe something other than the term specified.

*Bodie - Chapter 02 #13*
*Chapter 02*
*Difficulty: Easy*

14. In the event of the firm's bankruptcy

A. the most shareholders can lose is their original investment in the firm's stock.

B. common shareholders are the first in line to receive their claims on the firm's assets.

C. bondholders have claim to what is left from the liquidation of the firm's assets after paying the shareholders.

D. the claims of preferred shareholders are honored before those of the common shareholders.

**E.** **a** and **d**.

Shareholders have limited liability and have residual claims on assets. Bondholders have a priority claim on assets, and preferred shareholders have priority over common shareholders.

*Bodie - Chapter 02 #14*

*Chapter 02*

*Difficulty: Moderate*

15. Which of the following is **true** regarding a firm's securities?

A. Common dividends are paid before preferred dividends.

B. Preferred stockholders have voting rights.

**C.** Preferred dividends are usually cumulative.

D. Preferred dividends are contractual obligations.

E. Common dividends usually can be paid if preferred dividends have been skipped.

The only advantages of preferred dividends over common dividends are that preferred dividends must be paid first and any skipped preferred dividends must be paid before common dividends may be paid.

*Bodie - Chapter 02 #15*

*Chapter 02*

*Difficulty: Easy*

16. Which of the following is **true** of the Dow Jones Industrial Average?

A. It is a value-weighted average of 30 large industrial stocks.

B. It is a price-weighted average of 30 large industrial stocks.

C. The divisor must be adjusted for stock splits.

D. **a** and **c**.

**E.** **b** and **c**.

The Dow Jones Industrial Average is a price-weighted index of 30 large industrial firms and the divisor must be adjusted when any of the stocks on the index split.

*Bodie - Chapter 02 #16*

*Chapter 02*

*Difficulty: Easy*

17. Which of the following indices is(are) market-value weighted?

I) The S&P/TSX Composite Index.

II) The Standard and Poor's Composite 500-Stock Index Response

III) The Dow Jones Industrial Average.

A. I only

**B.** I and II only

C. I and III only

D. I, II, and III

E. II and III only

The Dow Jones Industrial Average is a price-weighted index.

*Bodie - Chapter 02 #17*

*Chapter 02*

*Difficulty: Moderate*

18. The Dow Jones Industrial Average (DJIA) is computed by:

A. adding the prices of 30 large "blue-chip" stocks and dividing by 30.

B. calculating the total market value of the 30 firms in the index and dividing by 30.

**C.** adding the prices of the 30 stocks in the index and dividing by a divisor.

D. adding the prices of the 500 stocks in the index and dividing by a divisor.

E. adding the prices of the 30 stocks in the index and dividing by the value of these stocks as of some base date period.

When the DJIA became a 30-stock index, response **a** was true; however, as stocks on the index have split and been replaced, the divisor has been adjusted. In August 2000 the divisor was 0.1706.

*Bodie - Chapter 02 #18*

*Chapter 02*

*Difficulty: Easy*

19. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
|---|---|---|
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

The price-weighted index constructed with the three stocks is

A. 30

**B.** 40

C. 50

D. 60

E. 70

($40 + $70 + $10)/3 = $40.

*Bodie - Chapter 02 #19*

*Chapter 02*

*Difficulty: Easy*

20. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
| --- | --- | --- |
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

The value-weighted index constructed with the three stocks using a divisor of 100 is

A. 1.2

B. 1200

**C.** 490

D. 4900

E. 49

The sum of the value of the three stocks divided by 100 is 490: [($40 x 200) + ($70 x 500) + ($10 x 600)]/100 = 490.

*Bodie - Chapter 02 #20*

*Chapter 02*

*Difficulty: Moderate*

21. Consider the following three stocks:

| Stock | Price | Number of shares outstanding |
|---|---|---|
| Stock A | $40 | 200 |
| Stock B | $70 | 500 |
| Stock C | $10 | 600 |

Assume at these prices the value-weighted index constructed with the three stocks is 490. What would the index be if stock B is split 2 for 1 and stock C 4 for 1?

A. 265

B. 430

C. 355

**D.** 490

E. 1000

Value-weighted indexes are not affected by stock splits.

*Bodie - Chapter 02 #21*

*Chapter 02*

*Difficulty: Moderate*

22. The asked bank discount yield on a T-bill is 5 percent. What is the asked price of the bill if it matures in 60 days and has a face value of $10,000?

A. $9,500.00

**B.** $9,916.67

C. $9,523.81

D. $8,753.14

E. $9,876.52

$10,000 (1 - 0.05 x 60/360) = $9,916.67.

*Bodie - Chapter 02 #22*

*Chapter 02*

*Difficulty: Moderate*

23. A T-bill has a face value of $10,000 and is selling for $9,800. If the T-bill matures in 90 days, what is its effective annual yield?

A. 8.16%.

B. 2.04%.

**C.** 8.54%.

D. 6.12%.

E. 8.42%

($10,000 - $9,800)/$9,800 = 0.020408; (1.020408)(365/90) - 1 = 8.54%.

*Bodie - Chapter 02 #23*

*Chapter 02*

*Difficulty: Moderate*

24. The price quotations of Canada bonds show an ask price of 104:08 (i.e. 104 and 8/32) and a bid price of 104:04. As a buyer of the bond what is the dollar price you expect to pay?

A. $10,480.00

**B.** $10,425.00

C. $10,440.00

D. $10,412.50

E. $10,404.00

You pay the asking price of the dealer, 104 8/32, or 104.25% of $10,000, or $10,425.00.

*Bodie - Chapter 02 #24*
*Chapter 02*
*Difficulty: Moderate*

25. An investor purchases one municipal and one corporate bond that pay rates of return of 8% and 10%, respectively. If the investor is in the 20% marginal tax bracket, his or her after tax rates of return on the municipal and corporate bonds would be ________ and ______, respectively.

A. 8% and 10%

**B.** 8% and 8%

C. 6.4% and 8%

D. 6.4% and 10%

E. 10% and 10%

$r_c$ = 0.10(1 - 0.20) = 0.08, or 8%; $r_m$ = 0.08(1 - 0) = 8%.

*Bodie - Chapter 02 #25*
*Chapter 02*
*Difficulty: Moderate*

26. If a U.S. Treasury note has a bid price of $975, the quoted bid price in the Wall Street Journal would be

A. 97:50

**B.** 97:16

C. 97:80

D. 94:24

E. 97:75

Treasuries are quoted as a percent of $1,000 and in 1/32s.

*Bodie - Chapter 02 #26*

*Chapter 02*

*Difficulty: Easy*

27. If a Treasury note has a bid price of $995, the quoted bid price would be

A. 9:50.

**B.** 99:16.

C. 9:80.

D. 9:24.

E. 9:32.

Treasuries are quoted as a percent of $1,000 and in 1/32s.

*Bodie - Chapter 02 #27*

*Chapter 02*

*Difficulty: Easy*

28. In calculating the Standard and Poor's stock price indices, the adjustment for stock split occurs:

A. by adjusting the divisor.

**B.** automatically.

C. by adjusting the numerator.

D. quarterly, on the last trading day of each quarter.

E. none of these.

The calculation of the value-weighted S&P indices includes both price and number of shares of each of the stocks in the index. Thus, the effects of stock splits are automatically incorporated into the calculation.

*Bodie - Chapter 02 #28*
*Chapter 02*
*Difficulty: Easy*

29. Which of the following statements regarding the Dow Jones Industrial Average (DJIA) is **false**?

A. The DJIA is not very representative of the market as a whole.

B. The DJIA consists of 30 blue chip stocks.

**C.** The DJIA is affected equally by changes in low and high priced stocks.

D. The DJIA divisor needs to be adjusted for stock splits.

E. The value of the DJIA is much higher than individual stock prices.

The high priced stocks have much more impact on the DJIA than do the lower priced stocks.

*Bodie - Chapter 02 #29*
*Chapter 02*
*Difficulty: Easy*

30. The index that includes the largest number of actively traded stock is:

A. the NASDAQ Composite Index.

B. the NYSE Composite Index.

**C.** the Wilshire 5000 Index.

D. the Value Line Composite Index.

E. the Russell Index.

The Wilshire 5000 is the largest readily available stock index, consisting of the stocks traded on the organized exchanges and the OTC stocks.

*Bodie - Chapter 02 #30*
*Chapter 02*
*Difficulty: Easy*

31. If the market prices of each of the 30 stocks in the Dow Jones Industrial Average (DJIA) all change by the same percentage amount during a given day, which stock will have the greatest impact on the DJIA?

**A.** The stock trading at the highest dollar price per share.

B. The stock with total equity has the higher market value.

C. The stock having the greatest amount of equity in its capital structure.

D. The stock having the lowest volatility.

E. All will have an equal impact.

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

*Bodie - Chapter 02 #31*
*Chapter 02*
*Difficulty: Moderate*

32. A 5.5% 20-year municipal bond is currently priced to yield 7.2%. For a taxpayer in the 33% marginal tax bracket, this bond would offer an equivalent taxable yield of:

A. 8.20%.

**B.** 10.75%.

C. 11.40%.

D. 4.82%.

E. none of these.

0.072 = r(1 - t); 0.072 = r(0.67); r = 0.072/0.67; r = 0.1075 = 10.75%.

*Bodie - Chapter 02 #32*
*Chapter 02*
*Difficulty: Moderate*

33. The Value Line Index is an equally weighted geometric average of the return of about 1,700 firms. What is the value of an index based on the geometric average returns of three stocks, where the returns on the three stocks during a given period were 20%, -10%, and 5%?

**A.** 4.3%

B. 5.0%

C. 11.7%

D. 13.4%

E. 12.2%

$[(1.2)(0.9)(1.05)]^{1/3} - 1 = 4.28\%$.

*Bodie - Chapter 02 #33*
*Chapter 02*
*Difficulty: Moderate*

34. The stocks on the Dow Jones Industrial Average

A. have remained unchanged since the creation of the index.

B. include most of the stocks traded on the NYSE.

**C.** are changed occasionally as circumstances dictate.

D. consist of stocks on which the investor cannot lose money.

E. **b** and **c**.

The stocks on the DJIA are only a small sample of the entire market, have been changed occasionally since the creation of the index, and one can lose money on any stock. See text box on page 49 for a list of DJIA stock changes.

*Bodie - Chapter 02 #34*
*Chapter 02*
*Difficulty: Easy*

35. Brokers' calls

A. are funds used by individuals who wish to buy stocks on margin.

B. are funds borrowed by the broker from the bank, with the agreement to repay the bank immediately if requested to do so.

C. carry a rate that is usually about one percentage point lower than the rate on U.S. T-bills.

**D.** **a** and **b**.

E. **a** and **c**.

Brokers' calls are funds borrowed from banks by brokers and loaned to investors in margin accounts.

*Bodie - Chapter 02 #35*
*Chapter 02*
*Difficulty: Easy*

36. A form of short-term borrowing by dealers in government securities is

A. reserve requirements.

**B.** repurchase agreements

C. banker's acceptances.

D. commercial paper.

E. brokers' calls.

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

*Bodie - Chapter 02 #36*
*Chapter 02*
*Difficulty: Easy*

37. Which of the following securities is a money market instrument?

A. Treasury note

B. Treasury bond.

C. municipal bond.

**D.** commercial paper.

E. mortgage security.

Only commercial paper is a money market security. The others are capital market instruments.

*Bodie - Chapter 02 #37*
*Chapter 02*
*Difficulty: Easy*

38. The call provision in Canada securities

I) is used with Canada Bills.

II) is used with Canada Bonds.

III) gives the issuer the right to repurchase the security at par.

IV gives the issuer the right to repurchase the security at a premium over par.

<u>A.</u> II and III are correct.

B. II and IV are correct.

C. I, II and III are correct.

D. I, II and IV are correct.

E. Only II is correct.

Call provisions, giving the issuer the right to repurchase the security at par, are included in some Canada Bonds.

*Bodie - Chapter 02 #38*

*Chapter 02*

*Difficulty: Moderate*

39. The yield to maturity reported in the financial pages for Treasury securities

A. is calculated by compounding the semiannual yield.

B. is calculated by doubling the semiannual yield.

C. is also called the bond equivalent yield.

D. is calculated as the yield-to-call for premium bonds.

**E.** Both **b** and **c** are true.

The yield to maturity shown in the financial pages is an APR calculated by doubling the semi-annual yield. It is also called the bond equivalent yield. The yield to call is reported for premium bonds.

*Bodie - Chapter 02 #39*
*Chapter 02*
*Difficulty: Easy*

40. As a taxpayer, in order for you to be indifferent between the after tax returns on a corporate bond paying 8.5% and a tax-exempt municipal bond paying 6.12%, what would your tax bracket need to be?

A. 33%

B. 72%

C. 15%

**D.** 28%

E. Cannot tell from the information given

.0612 = .085(1 - t); (1 - t) = 0.72; t = .28

*Bodie - Chapter 02 #40*
*Chapter 02*
*Difficulty: Moderate*

41. For a taxpayer in the 25% marginal tax bracket, a 20-year municipal bond currently yielding 5.5% would offer an equivalent taxable yield of:

A. 7.33%.

B. 10.75%.

C. 5.5%.

D. 4.125%.

E. 6.45%.

0.055 = r(1 - t); r = 0.055/0.75; r = 0.0733.

*Bodie - Chapter 02 #41*

*Chapter 02*

*Difficulty: Moderate*

42. Which of the following are true about Treasury Bills?

I) T-Bills are capital market instruments.

II) T-Bills sell through both competitive and noncompetitive bids.

III) T-Bill yields are quoted in the financial pages as effective annual rates of return.

IV) At the T-Bill's maturity, the holder receives the face value of the Bill.

A. I and II

B. II, III, and IV

C. I, II, and IV

D. II and III

E. II and IV

*Bodie - Chapter 02 #42*

*Chapter 02*

*Difficulty: Moderate*

43. At what price could an investor purchase the following T-Bill?

| Days to Maturity | Bid | Asked | Chg. | Ask Yield |
|---|---|---|---|---|
| 58 | 6.01 | 5.97 | +0.01 | 6.11 |

A. $9,897.16

B. $9,903.17

**C.** $9,903.82

D. $9,901.56

E. $9,905.43

P = $10,000 * [1 - .0597 * (58/360)] = $9,903.82

*Bodie - Chapter 02 #43*

*Chapter 02*

*Difficulty: Moderate*

44. What is the bond equivalent yield of a T-Bill that is selling for $9,453 and has 173 days remaining until maturity?

A. 11.54%

**B.** 12.21%

C. 12.04%

D. 11.38%

E. 12.15%

rBEY = (10,000 - 9,453)/9,453 * (365/173) = 12.21%

*Bodie - Chapter 02 #44*

*Chapter 02*

*Difficulty: Moderate*

45. What does the term "negotiable" mean with regard to negotiable certificates of deposit?

**A.** The CD can be sold to another investor if the owner needs to cash it in before its maturity date.
B. The rate of interest on the CD is subject to negotiation.
C. The CD is automatically reinvested at its maturity date.
D. The CD has staggered maturity dates built in.
E. The interest rate paid on the CD will vary with a designated market rate.

*Bodie - Chapter 02 #45*
*Chapter 02*
*Difficulty: Easy*

46. The Canada Mortgage and Housing Corporation provides

A. a primary market for mortgage transactions.
**B.** liquidity for the mortgage market.
C. a primary market for farm loan transactions.
D. liquidity for the farm loan market.
E. a source of funds for government agencies.

*Bodie - Chapter 02 #46*
*Chapter 02*
*Difficulty: Easy*

47. Suppose an investor is considering a corporate bond with a 7.17% before-tax yield and a municipal bond with a 5.93% before-tax yield. At what marginal tax rate would the investor be indifferent between investing in the corporate and investing in the municipal?

A. 15.4%

B. 23.7%

C. 39.5%

<u>D.</u> 17.3%

E. 12.4%

$t_m$ = 1 - (5.97%/7.17%) = 17.29%

*Bodie - Chapter 02 #47*

*Chapter 02*

*Difficulty: Moderate*

48. Which of the following are characteristics of preferred stock?

I) It pays its holder a fixed amount of income each year, at the discretion of its managers.

II) It gives its holder voting power in the firm.

III) Its dividends are usually cumulative.

IV) Failure to pay dividends may result in bankruptcy proceedings.

A. I, III, and IV

B. I, II, and III

<u>C.</u> I and III

D. I, II, and IV

E. I, II, III, and IV

*Bodie - Chapter 02 #48*

*Chapter 02*

*Difficulty: Moderate*

49. Bond market indexes can be difficult to construct because

A. they cannot be based on firms' market values.

**B.** bonds tend to trade infrequently, making price information difficult to obtain.

C. there are so many different kinds of bonds.

D. prices cannot be obtained for companies that operate in emerging markets.

E. corporations are not required to disclose the details of their bond issues.

*Bodie - Chapter 02 #49*

*Chapter 02*

*Difficulty: Moderate*

50. With regard to a futures contract, the long position is held by

A. the trader who bought the contract at the largest discount.

B. the trader who has to travel the farthest distance to deliver the commodity.

C. the trader who plans to hold the contract open for the lengthiest time period.

**D.** the trader who commits to purchasing the commodity on the delivery date.

E. the trader who commits to delivering the commodity on the delivery date.

*Bodie - Chapter 02 #50*

*Chapter 02*

*Difficulty: Easy*

51. With regard to a futures contract, the short position is held by

A. the trader who bought the contract at the largest discount.

B. the trader who has to travel the farthest distance to deliver the commodity.

C. the trader who plans to hold the contract open for the lengthiest time period.

D. the trader who commits to purchasing the commodity on the delivery date.

**E.** the trader who commits to delivering the commodity on the delivery date.

The trader agreeing to buy the underlying asset is said to be long the contract whereas the trader agreeing to deliver the underlying asset is said to be short the contract.

*Bodie - Chapter 02 #51*
*Chapter 02*
*Difficulty: Easy*

52. Distinguish between Federal Government debt and Federal Crown Corporation debt.

Debt issued by the Federal Government is backed by the full taxing power of the Canadian Federal Government. Such instruments are considered to be free of default risk. Some agencies of the federal government issue debt also. Technically, this debt is not backed by the federal government. However, most investors think that if any Canadian federal agency were having trouble meeting a debt commitment, the Canadian Treasury would come to the rescue of the agency. Thus, as a result, federal agency issues like those of federal Crown Corporations are considered almost as safe as Canadian Treasury issues and earn a yield only slightly higher than that of Canadian Treasury issues.

Feedback: The purpose of this question is to ascertain whether or not the student understands the subtle differences between Treasury and agency issues.

*Bodie - Chapter 02 #52*
*Chapter 02*

53. Discuss the advantages and disadvantages of common stock ownership, relative to other investment alternatives.

The advantages of common stock ownership are: the stockholder is allowed to participate in earnings, that is, if the firm is doing well, these benefits are passed on to the shareholder in the form of dividends and/or increased market price of the stock (with fixed income investments, such as bonds and preferred stock, the investor receives a fixed payment, regardless of the earnings of the firm); in addition, common stock investment represents ownership in the firm, giving the shareholder voting rights; and finally, the shareholder is liable only for the amount of the shareholder's investment in the stock. That is, unlike a sole proprietorship or partnership, the common stockholder has limited liability.
The disadvantages of common stock ownership are: the cash flow from dividends (if any) and the appreciation of the stock are uncertain, the firm makes no commitment to the common shareholder regarding future income resulting from common stock ownership; in addition, the claims of the bondholders and other creditors come before the benefits of the common shareholders; the preferred shareholders must receive dividends prior to common shareholders, if preferred dividends are skipped, these dividends are cumulative and skipped preferred dividends must be paid before common dividends are paid. Thus, the claims of the common shareholder are residual; that is, only after all other creditors' and investors' claims have been met will the claims of the common shareholder be honored.

Feedback: This question was designed to determine whether the student understands the priorities of claims upon a firm, and the benefits and risks associated with common stock ownership.

*Bodie - Chapter 02 #53*
*Chapter 02*
*Difficulty: Moderate*

54. The Dow Jones Industrial Average, the New York Stock Exchange Index, and the Value Line Index have unique characteristics. Discuss how these indices are calculated and any problems/advantages associated with the specific indices.

The Dow Jones Industrial Average (DJIA) is the oldest index. The index consists of 30 "blue chip" industrial firms. Thus, the index is comprised of a small sample and is not representative of the market as a whole. The index is "price-weighted", that is, the only market variables in the calculation of the index are the prices of the stocks on the index. As the stocks on the index split, the divisor must be adjusted downward. In August 2000, the value of the divisor was 0.1706. The result of the small divisor is the very large value of the average, which is not representative of the average price of stock in anyone's portfolio! Thus, the movements in the average, when quoted in absolute numbers are quite large, which cause many people to think that the market is very volatile. A more realistic way to assess the market's movement is to look at the percent change in the value of the index from one day to the next. Finally, the movements of the index are influenced much more by price changes in the higher priced stocks in the index than by changes in the lower priced stocks.

The New York Stock Exchange Index is a value-weighted index comprised of every stock listed on the NYSE. "Value-weighted" means that each stock is represented by price per share times number of shares, as a percent of the entire value of the NYSE. As a result of this calculation, no divisor manipulation is necessary. Obviously, this index is much more representative of the market, as a whole, than is the DJIA.

The Value Line Index consists of the 1700 + firms followed by Value Line Investment Survey. The index is price-weighted; the index is calculated as the geometric average of the price relatives (price of stock on day of calculation divided by price of stock on previous day) of the 1700 + stocks. However, when splits occur, the price in the denominator of the price relative merely is adjusted to reflect that split price; thus, no cumbersome divisor-adjustment is necessary and no extremely large value results. Only the DJIA results in an extremely large number.

Feedback: This question is designed to determine whether the student understands the various types of calculations involved in the representative indexes and the advantages and disadvantages of these indexes.

*Bodie - Chapter 02 #54*
*Chapter 02*
*Difficulty: Moderate*

| | $P_0$ | $Q_0$ | $P_1$ | $Q_1$ | $P_2$ | $Q_2$ |
|---|---|---|---|---|---|---|
| **Stock A** | \$70 | 200 | \$72 | 200 | \$36 | 400 |
| **Stock B** | \$85 | 500 | \$81 | 500 | \$81 | 500 |
| **Stock C** | \$105 | 300 | \$98 | 300 | \$98 | 300 |

*Bodie - Chapter 02*
*Chapter 02*

55. Based on the information given, for a price-weighted index of the three stocks calculate:

a. the rate of return for the first period (t = 0 to t = 1).
b. the value of the divisor in the second period (t = 2). Assume that Stock A had a 2-1 split during this period.
c. the rate of return for the second period (t = 1 to t = 2).

a. The price-weighted index at time 0 is (70 + 85 + 105)/3 = 86.67. The price-weighted index at time 1 is (72 + 81 + 98)/3 = 83.67. The return on the index is 83.67/86.67 - 1 = -3.46%.
b. The divisor must change to reflect the stock split. Because nothing else fundamentally changed, the value of the index should remain 83.67. So the new divisor is (36 + 81 + 98)/83.67 = 2.57. The index value is (36 + 81 + 98)/2.57 = 83.67.
c. The rate of return for the second period is 83.67/83.67 - 1 = 0.00%

*Bodie - Chapter 02 #55*
*Chapter 02*
*Difficulty: Difficult*

56. Based on the information given for the three stocks, calculate the first-period rates of return (from t = 0 to t = 1) on

a. a market-value-weighted index.

b. an equally-weighted index

c. a geometric index

a. The total market value at time 0 is $70*200 + $85*500 + $105*300 = $88,000. The total market value at time 1 is $72*200 + $81*500 + $98*300 = $84,300. The return is $84,300/$88,000 - 1 = -4.20%.

b. The return on Stock A for the first period is $72/$70 - 1 = 2.86%. The return on Stock B for the first period is $81/$85 - 1 = -4.71%. The return on Stock C for the first period is $98/$105 - 1 = -6.67%. The return on an equally weighted index of the three stocks is (2.86% - 4.71% - 6.67%)/3 = -2.84%.

c. The geometric average return is [(1 + .0286)(1 - .0471)(1 - .0667)](1/3) - 1 = [(1.0286)(0.9529)(0.9333)]0.3333 -1 = -2.92%

*Bodie - Chapter 02 #56*

*Chapter 02*

*Difficulty: Difficult*

# c2 Summary

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| Difficulty: Moderate | 25 |

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