Chapter 2 Self Study Questions

True/False
Indicate whether the sentence or statement is true or false.

____ 1. If an individual investor buys and sells existing stocks through a broker, these are primary market transactions.

____ 2. If the Federal Reserve tightens the money supply, other things held constant, short-term interest rates will be pushed upward, and this increase probably will be greater than the increase in rates in the long-term market.

____ 3. The fact that a percentage of the interest income received by one corporation is excluded from taxable income has encouraged firms to use more debt financing relative to equity financing.

____ 4. If the tax laws stated that $0.50 out of every $1.00 of interest paid by a corporation was allowed as a tax-deductible expense, it would probably encourage companies to use more debt financing than they presently do, other things held constant.

____ 5. Financial asset markets deal with stocks, bonds, mortgages, and other claims on real assets with respect to the distribution of future cash flows.

____ 6. The yield curve is downward sloping, or inverted, if the long-term rates are higher than the short-term rates.

____ 7. American depository receipts are foreign stocks that sell in American stock exchanges and are denominated in dollar prices.

____ 8. If you have information that a recession is ending, and the economy is about to enter a boom, and your firm needs to borrow money, it should probably issue long-term rather than short-term debt.

____ 9. The two reasons most experts give for the existence of a positive maturity risk premium are (1) because investors are assumed to be risk averse, and (2) because investors prefer to lend long while firms prefer to borrow short.

____ 10. An investor with a six-year investment horizon believes that interest rates are determined only by expectations about future interest rates, (i.e., this investor believes in the expectations theory). This investor should expect to earn the same rate of return over the 6-year time horizon if he or she buys a 6-year bond or a 3-year bond now and another 3-year bond three years from now (ignore transaction costs).

____ 11. The existence of an upward sloping yield curve proves that the liquidity preference theory is correct, because an upward sloping curve necessarily implies that firms must offer a maturity risk premium in order to induce investors to lend for longer periods.

____ 12. Suppose financial institutions, such as savings and loans, were required by law to make long-term, fixed interest rate mortgages, but, at the same time, were largely restricted, in terms of their capital sources, to deposits that could be withdrawn on demand. Under these conditions, these financial institutions should prefer a "normal" yield curve to an inverted curve.

____ 13. Investors with a higher time preference for consumption will demand a lower rate of return to forego current consumption and save than investors with a lower time preference for consumption.

____ 14. Firms with the most profitable investment opportunities are willing and able to pay the most for capital, so they tend to attract it away from less efficient firms or from those whose products are not in demand.

____ 15. Bonds with higher liquidity will demand higher interest rates in the market since they can be easily converted into cash on short notice at or near the fair market value for that bond.

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 16. Which of the following statements is most correct? Other things held constant.
- a. the "liquidity preference theory" would generally lead to an upward sloping yield curve.
- b. the "market segmentation theory" would generally lead to an upward sloping yield curve.
- c. the "expectations theory" would generally lead to an upward sloping yield curve.
- d. the yield curve under "normal" conditions would be horizontal (i.e., flat).
- e. a downward sloping yield curve would suggest that investors expect interest rates to increase in the future.

____ 17. Your uncle would like to restrict his interest rate risk and his default risk, but he still would like to invest in corporate bonds. Which of the possible bonds listed below best satisfies your uncle's criteria?
- a. AAA bond with 10 years to maturity.
- b. BBB perpetual bond.
- c. BBB bond with 10 years to maturity.
- d. AAA bond with 5 years to maturity.
- e. BBB bond with 5 years to maturity.

____ 18. Which of the following statements is correct?
- a. For the most part, our federal tax rates are progressive, because higher incomes are taxed at higher average rates.
- b. Bonds issued by a municipality such as the city of Miami would carry a lower interest rate than bonds with the same risk and maturity issued by a private corporation such as Florida Power & Light.
- c. Our federal tax laws tend to encourage corporations to finance with debt rather than with equity securities.
- d. Our federal tax laws encourage the managers of corporations with surplus cash to invest it in stocks rather than in bonds. However, other factors may offset tax considerations.
- e. All of the above statements are true.

____ 19. A corporate stock that was issued last year would now trade in the __________ market.
- a. primary
- b. secondary
- c. money
- d. debt
- e. government securities

____ 20. When a corporation wants to raise funds by issuing new stocks or bonds, it generally uses the services of
- a. an investment banker.
- b. a commercial lender.
- c. the Securities and Exchange Commission (SEC).
- d. the New York Stock Exchange (NYSE).
- e. None of the above.

____ 21. Treasury bills, which represent debt of the U.S. government, have maturities less than one year. As a result, in which type of financial market do outstanding, or already issued, Treasury bills trade?
- a. capital market
- b. primary market
- c. money market
- d. stock markets
- e. Treasury bills trade in more than one of the above markets.

____ 22. Capital markets are markets for
- a. commercial paper.
- b. short-term debt securities.

c. long-term debt securities.
d. Treasury notes.
e. none of the above.

____ 23. The facilities needed to conduct over-the-counter market transactions include all of the following *except*:
a. physical stock exchange to sell and buy stocks
b. securities dealers who make the market
c. brokers acting as agent to bring investors and dealers together
d. electronic networks that provide communication links between brokers and dealers.
e. all of the above are needed for over-the-counter market transactions.

____ 24. Interest rates on 1-year, 2-year, and 3-year Treasury bills are 5%, 6%, and 7% respectively. Assume that the pure expectations theory holds and that the market is in equilibrium. Which of the following statements is most correct?
a. The maturity risk premium is positive.
b. Interest rates are expected to rise over the next two years.
c. The market expects one-year rates to be 5.5% one year from today.
d. Answers a, b, and c are all correct.
e. Only answers b and c are correct.

____ 25. If the Federal Reserve sells $50 billion of short-term U.S. Treasury securities to the public, other things held constant, what will this tend to do to short-term security prices and interest rates?
a. Prices and interest rates will both rise.
b. Prices will rise and interest rates will decline.
c. Prices and interest rates will both decline.
d. Prices will decline and interest rates will rise.
e. There will be no changes in either prices or interest rates.

____ 26. Assume that the current yield curve is upward sloping, or normal. This implies that
a. Short-term interest rates are more volatile than long-term rates.
b. Inflation is expected to subside in the future.
c. The economy is at the peak of a business cycle.
d. Long-term bonds are a better buy than short-term bonds.
e. None of the above statements is necessarily implied by the yield curve given.

____ 27. Which of the following statements is correct?
a. The maturity premiums embedded in the interest rates on U.S. Treasury securities are due primarily to the fact that the probability of default is higher on long-term bonds than on short-term bonds.
b. Reinvestment rate risk is lower, other things held constant, on long-term than on short-term bonds.
c. According to the market segmentation theory of the term structure of interest rates, we should normally expect the yield curve to slope downward.
d. The expectations theory of the term structure of interest rates states that borrowers generally prefer to borrow on a long-term basis while savers generally prefer to lend on a short-term basis, and that as a result, the yield curve normally is upward sloping.
e. If the maturity risk premium was zero and the rate of inflation was expected to <u>decrease</u> in the future, then the yield curve for U.S. Treasury securities would, other things held constant, have an upward slope.

____ 28. Allen Corporation can (1) build a new plant which should generate a before-tax return of 11 percent, or (2) invest the same funds in the preferred stock of FPL, which should provide Allen with a before-tax return of 9%, all in the form of dividends. Assume that Allen's marginal tax rate is 25 percent, and that 70 percent of dividends received are excluded from taxable income. If the plant project is divisible into small increments, and if the two investments are equally risky, what combination of these two possibilities will maximize Allen's effective return on the money invested?

a. All in the plant project.
b. All in FPL preferred stock.
c. 60% in the project; 40% in FPL.
d. 60% in FPL; 40% in the project.
e. 50% in each.

____ 29. Which of the following is considered an organized stock exchange?
a. New York Stock Exchange (NYSE)
b. National Association of Security Dealers Automated Quotation System (NASDAQ)
c. Over-the-Counter (OTC) market
d. All of the above are organized exchanges.
e. None of the above is an organized exchange.

____ 30. Which of the following is *not* a considered financial intermediary?
a. commercial bank
b. savings and loan association
c. pension fund
d. investment bank
e. All of the above are financial intermediaries.

____ 31. Which of the following transactions takes place in secondary markets?
a. New stock sold in an initial public offering.
b. Treasury securities auctioned off by the government.
c. Stock sold by an insurance company to adjust its portfolio of assets'.
d. Stock sold in a seasoned equity offering.
e. None of the above.

____ 32. Which of the following was not a result of the Gramm-Leach-Bliley Act of 1999 which abolished several restrictions on banks?
a. Qualified banks can engage in investment banking and related activities.
b. Qualified banks can loan out 100% of deposits without holding reserves.
c. Qualified banks can sell insurance.
d. Qualified banks can perform non-financial activities that do not increase the risks of the institutions.
e. All of the above were a direct result of the Gramm-Leach-Bliley Act of 1999.

____ 33. During an expansion in the economy, the demand for capital __________ creating __________ pressure on interest rates.
a. increases; downward
b. increases; upward
c. decreases; downward
d. decreases; upward
e. remains unchanged; unpredictable

____ 34. The normal yield curve is upward sloping implying that
a. the return on short-term securities are higher than the return on long-term securities of similar risk.
b. the return on long-term securities are equal to the return on short-term securities of similar risk.
c. the return on short-term securities are lower than the return on long-term securities of similar risk.
d. the return on bonds with a higher default risk is higher than the returns on bonds with lower default risk.
e. the return on bonds with a lower default risk is higher than the returns on bonds with higher default risk.

____ 35. Which of the following factors distinguish the banking system in the United States from banking structures in other countries?
a. Financial institutions in the United States are less regulated than their foreign counterparts.
b. Financial institutions in the United States have fewer limitations with regard to branching activity than their foreign counterparts.
c. Financial institutions in the United States have greater limitations with regard to non-banking business relationships than their foreign counterparts.
d. Financial institutions in the United States have been able to grow much larger in size than their foreign counterparts.
e. Financial institutions in the United States dominate international banking activities.

____ 36. Carter Corporation has some money to invest, and its treasurer is choosing between City of Chicago municipal bonds and U.S. Treasury bonds. Both have the same maturity, and they are equally risky and liquid. If Treasury bonds yield 6 percent, and Carter's marginal income tax rate is 40 percent, what yield on the Chicago municipal bonds would make Carter's treasurer indifferent between the two?
a. 2.40%
b. 3.60%
c. 4.50%
d. 5.25%
e. 6.00%

____ 37. As a corporate investor paying a marginal tax rate of 34 percent, if 70 percent of dividends are excludable, what would be your after-tax dividend yield on preferred stock with a 16 percent before-tax dividend yield?
a. 6.36%
b. 7.36%
c. 12.19%
d. 13.01%
e. 14.37%

____ 38. Treasury securities that mature in 6 years currently have an interest rate of 8.5%. Inflation is expected to be 5% each of the next three years and 6% each year after the third year. The maturity risk premium is estimated to be 0.1%(t - 1), where t is equal to the maturity of the bond (i.e., the maturity risk premium of a one-year bond is zero). The real risk-free rate is assumed to be constant over time. What is the real risk-free rate of interest?
a. 0.25%
b. 0.50%
c. 1.00%
d. 1.75%
e. 2.50%

____ 39. Assume that the expectations theory holds, and that liquidity and maturity risk premiums are zero. If the annual rate of interest on a 2-year Treasury bond is 10.5 percent and the rate on a 1-year Treasury bond is 12 percent, what rate of interest should you expect on a 1-year Treasury bond one year from now?
a. 9.0%
b. 9.5%
c. 10.0%
d. 10.5%
e. 11.0%

____ 40. Assume that expected rates of inflation over the next 5 years are 4 percent, 7 percent, 10 percent, 8 percent, and 6 percent, respectively. What is the average expected inflation rate over this 5-year period?
a. 6.5%
b. 7.5%
c. 8.0%
d. 6.0%

e. 7.0%

____ 41. Your corporation has the following cash flows:

Operating income	$250,000
Interest received	10,000
Interest paid	45,000
Dividends received	20,000
Dividends paid	50,000

If the applicable income tax rate is 40 percent, and if 70 percent of dividends received are exempt from taxes, what is the corporation's tax liability?
a. $74,000
b. $88,400
c. $91,600
d. $100,000
e. $106,500

____ 42. Assume that k^* = 1.0%; the maturity risk premium is found as MRP = 0.2%(t - 1) where t = years to maturity; the default risk premium for AT&T bonds is found as DRP = 0.07%(t - 1); the liquidity premium is 0.50% for AT&T bonds but zero for Treasury bonds; and inflation is expected to be 7%, 6%, and 5% during the next three years and then 4% thereafter. What is the difference in interest rates between 10-year AT&T bonds and 10-year Treasury bonds?
a. 0.25%
b. 0.50%
c. 0.63%
d. 1.00%
e. 1.13%

____ 43. You are given the following data:

k^* = real risk-free rate	4%
Constant inflation premium	7%
Maturity risk premium	1%
Default risk premium for AAA bonds	3%
Liquidity premium for long-term T-bonds	2%

Assume that a highly liquid market does not exist for long-term T-bonds, and the expected rate of inflation is a constant. Given these conditions, the nominal risk-free rate for T-bills is __________, and the rate on long-term Treasury bonds is __________.
a. 4%; 14%
b. 4%; 15%
c. 11%; 14%
d. 11%; 15%
e. 11%; 17%

____ 44. You read in *The Wall Street Journal* that 30-day T-bills currently are yielding 8 percent. Your brother-in-law, a broker at Kyoto Securities, has given you the following estimates of current interest rate premiums:

Inflation premium	5%
Liquidity premium	1%
Maturity risk premium	2%
Default risk premium	2%

Based on these data, the real risk-free rate of return is

a. 0%
b. 1%
c. 2%
d. 3%
e. 4%

____ 45. Assume that a 3-year Treasury note has no maturity premium, and that the real, risk-free rate of interest is 3 percent. If the T-note carries a yield to maturity of 13 percent, and if the expected average inflation rate over the next 2 years is 11 percent, what is the implied expected inflation rate during Year 3?
a. 7%
b. 8%
c. 9%
d. 17%
e. 18%

____ 46. Assume that the current interest rate on a 1-year bond is 8 percent, the current rate on a 2-year bond is 10 percent, and the current rate on a 3-year bond is 12 percent. If the expectations theory of the term structure is correct, what is the <u>1-year</u> interest rate expected <u>during</u> Year 3? (Base your answer on an arithmetic rather than geometric average.)
a. 12.0%
b. 16.0%
c. 13.5%
d. 10.5%
e. 14.0%

____ 47. Assume that the real risk-free rate, k^*, is 4 percent, and that inflation is expected to be 9% in Year 1, 6% in Year 2, and 4% thereafter. Assume also that all Treasury bonds are highly liquid and free of default risk. If 2-year and 5-year Treasury bonds both yield 12%, what is the difference in the maturity risk premiums (MRPs) on the two bonds, i.e., what is MRP_5 - MRP_2?
a. 2.1%
b. 1.8%
c. 5.0%
d. 3.0%
e. 2.5%

____ 48. Solarcell Corporation has $20,000 which it plans to invest in marketable securities. It is choosing between AT&T bonds which yield 11%, State of Florida municipal bonds which yield 8%, and AT&T preferred stock with a dividend yield of 9%. Solarcell's corporate tax rate is 40%, and 70% of the preferred stock dividends it receives are tax exempt. Assuming that the investments are equally risky and that Solarcell chooses strictly on the basis of after-tax returns, which security should be selected? Answer by giving the after-tax rate of return on the highest yielding security.
a. 8.46%
b. 8.00%
c. 7.92%
d. 9.00%
e. 9.16%

____ 49. A 9 percent coupon bond issued by the State of Pennsylvania sells for $1,000 and thus provides a 9 percent yield to maturity. What yield on a Synthetic Chemical Company bond would cause the two bonds to provide the same after-tax rate of return to an investor in the 28 percent tax bracket?
a. 12.50%
b. 17.50%
c. 7.00%
d. 14.00%
e. 9.00%

Chapter 2 Self Study Questions
Answer Section

1. F
2. T
3. F
4. F
5. T
6. F
7. F
8. T
9. F
10. T
11. F
12. T
13. F
14. T
15. F
16. A
17. D
18. E
19. B
20. A
21. C
22. C
23. B
24. B
25. D
26. E
27. B
28. B
29. A
30. D
31. C
32. B
33. B
34. C
35. C
36. B
37. E
38. E
39. A
40. E
41. B
42. E
43. C
44. D
45. B
46. B
47. A
48. B
49. A

50. A
51. B
52. A
53.
54.
55. A
56. B
57. A