**Chapter 22**

**Futures Markets**

**Multiple Choice Questions**

1. A futures contract   
A. is an agreement to buy or sell a specified amount of an asset at the spot price on the expiration date of the contract.  
**B.** is an agreement to buy or sell a specified amount of an asset at a predetermined price on the expiration date of the contract.  
C. gives the buyer the right, but not the obligation, to buy an asset some time in the future.  
D. is a contract to be signed in the future by the buyer and the seller of the commodity.  
E. None of these is correct.

A futures contract locks in the price of a commodity to be delivered at some future date. Both the buyer and seller of the contract are committed.

 2. The terms of futures contracts \_\_\_\_\_\_\_\_\_\_ standardized, and the terms of forward contracts \_\_\_\_\_\_\_\_\_\_ standardized.   
A. are; are  
B. are not; are  
**C.** are; are not  
D. are not; are not  
E. are; may or may not be

Futures contracts are standardized and are traded on organized exchanges; forward contracts are not traded on organized exchanges, the participant negotiates for the delivery of any quantity of goods, and banks and brokers negotiate contracts as needed.

 3. Futures contracts \_\_\_\_\_\_\_\_\_\_ traded on an organized exchange, and forward contracts \_\_\_\_\_\_\_\_\_\_ traded on an organized exchange.   
A. are not; are  
B. are; are  
C. are not; are not  
**D.** are; are not  
E. are; may or may not be

Futures contracts are traded on an organized exchange, and forward contracts are not traded on an organized exchange.

4. In a futures contract the futures price is   
A. determined by the buyer and the seller when the delivery of the commodity takes place.  
B. determined by the futures exchange.  
**C.** determined by the buyer and the seller when they initiate the contract.  
D. determined independently by the provider of the underlying asset.  
E. None of these is correct.

The futures exchanges specify all the terms of the contracts except price; as a result, the traders bargain over the futures price.

 5. The buyer of a futures contract is said to have a \_\_\_\_\_\_\_\_\_\_ position and the seller of a futures contract is said to have a \_\_\_\_\_\_\_\_\_\_ position in futures.   
**A.** long; short  
B. long; long  
C. short; short  
D. short; long  
E. margined; long

The trader taking the long position commits to purchase the commodity on the delivery date. The trader taking the short position commits to delivering the commodity at contract maturity. The trader in the long position is said to "buy" the contract; the trader in the short position is said to "sell" the contract. However, no money changes hands at this time.

 6. Investors who take long positions in futures agree to \_\_\_\_\_\_\_\_\_\_ of the commodity on the delivery date, and those who take the short positions agree to \_\_\_\_\_\_\_\_\_\_ of the commodity.   
A. make delivery; take delivery  
**B.** take delivery; make delivery  
C. take delivery; take delivery  
D. make delivery; make delivery  
E. negotiate the price; pay the price

The trader taking the long position commits to purchase the commodity on the delivery date. The trader taking the short position commits to delivering the commodity at contract maturity. The trader in the long position is said to "buy" the contract; the trader in the short position is said to "sell" the contract. However, no money changes hands at this time.

 7. The terms of futures contracts such as the quality and quantity of the commodity and the delivery date are   
A. specified by the buyers and sellers.  
B. specified only by the buyers.  
**C.** specified by the futures exchanges.  
D. specified by brokers and dealers.  
E. None of these is correct.

The futures exchanges specify all the terms of the contracts except price; as a result, the traders bargain over the futures price.

8. A trader who has a \_\_\_\_\_\_\_\_\_\_ position in wheat futures believes the price of wheat will \_\_\_\_\_\_\_\_\_\_ in the future.   
**A.** long; increase  
B. long; decrease  
C. short; increase  
D. long; stay the same  
E. short; stay the same

The trader holding the long position (the person who will purchase the goods) will profit from a price increase. Profit to long position = Spot price at maturity − Original futures price.

 9. A trader who has a \_\_\_\_\_\_\_\_\_\_ position in gold futures wants the price of gold to \_\_\_\_\_\_\_\_\_\_ in the future.   
A. long; decrease  
**B.** short; decrease  
C. short; stay the same  
D. short; increase  
E. long; stay the same

Profit to short position = Original futures price − Spot price at maturity. Thus, the person in the short position profits if the price of the commodity declines in the future.

 10. The open interest on silver futures at a particular time is the   
A. number of silver futures contracts traded during the day.  
B. number of outstanding silver futures contracts for delivery within the next month.  
C. number of silver futures contracts traded the previous day.  
**D.** number of all long or short silver futures contracts outstanding.  
E. None of these is correct.

Open interest is the number of contracts outstanding. When contracts begin trading, open interest is zero; as time passes more contracts are entered. Most contracts are liquidated before the maturity date.

 11. Which one of the following statements regarding delivery is **true?**   
A. Most futures contracts result in actual delivery.  
**B.** Only one to three percent of futures contracts result in actual delivery.  
C. Only fifteen percent of futures contracts result in actual delivery.  
D. Approximately fifty percent of futures contracts result in actual delivery.  
E. Futures contracts never result in actual delivery.

Virtually all traders enter reversing trades to cancel their original positions, thereby realizing profits or losses on the contract.

12. Which of the following statements regarding delivery is most **false?**   
A. Most futures contracts result in actual delivery.  
B. Only one to three percent of futures contracts result in actual delivery.  
C. Only fifteen percent of futures contracts result in actual delivery.  
D. Both most futures contracts result in actual delivery and only one to three percent of futures contracts result in actual delivery  
**E.** Both most futures contracts result in actual delivery and only fifteen percent of futures contracts result in actual delivery

Virtually all traders enter reversing trades to cancel their original positions, thereby realizing profits or losses on the contract.

 13. You hold one long corn futures contract that expires in April. To close your position in corn futures before the delivery date you must   
A. buy one May corn futures contract.  
B. buy two April corn futures contract.  
**C.** sell one April corn futures contract.  
D. sell one May corn futures contract.  
E. None of these is correct.

The long position is considered the buyer; to close out the position one must take a reversing position, or sell the contract.

 14. Which one of the following statements is **true?**   
A. The maintenance margin is the amount of money you post with your broker when you buy or sell a futures contract.  
**B.** If the value of the margin account falls below the maintenance margin requirement, the holder of the contract will receive a margin call.  
C. A margin deposit can only be met with cash.  
D. All futures contracts require the same margin deposit.  
E. The maintenance margin is set by the producer of the underlying asset.

The maintenance margin applies to the value of the account after the account is opened; if the value of this account falls below the maintenance margin requirement, the holder of the contract will receive a margin call. A margin deposit can be made with cash or interest-earning securities; the margin deposit amounts depend on the volatility of the underlying asset.

 15. Which of the following statements is most **false?**   
A. The maintenance margin is the amount of money you post with your broker when you buy or sell a futures contract.  
B. If the value of the margin account falls below the maintenance margin requirement, the holder of the contract will receive a margin call.  
C. A margin deposit can only be met with cash.  
D. All futures contracts require the same margin deposit.  
**E.** The maintenance margin is the amount of money you post with your broker when you buy or sell a futures contract, a margin deposit can only be met with cash, all futures contracts require the same margin deposit

The maintenance margin applies to the value of the account after the account is opened; if the value of this account falls below the maintenance margin requirement, the holder of the contract will receive a margin call. A margin deposit can be made with cash or interest-earning securities; the margin deposit amounts depend on the volatility of the underlying asset.

 16. Financial futures contracts are actively traded on the following indices **except**   
A. the S&P 500 Index.  
B. the New York Stock Exchange Index.  
C. the Nikkei Index.  
D. the Dow Jones Industrial Index.  
**E.** All of these indices have actively traded futures contracts.

The indices are listed in Table 22.1.

 17. Financial futures contracts are actively traded on the following indices   
A. the S&P 500 Index.  
B. the New York Stock Exchange Index.  
C. the Nikkei Index.  
D. the Dow Jones Industrial Index.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 18. Agricultural futures contracts are actively traded on   
A. corn.  
B. oats.  
C. pork bellies.  
D. corn and oats.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 19. Agricultural futures contracts are actively traded on   
A. soybeans.  
B. oats.  
C. wheat.  
D. soybeans and oats.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 20. Agricultural futures contracts are actively traded on   
A. milk.  
B. orange juice.  
C. lumber.  
D. milk and orange juice.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

21. Agricultural futures contracts are actively traded on   
A. rice.  
B. sugar.  
C. canola.  
D. rice and sugar.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 22. Foreign currency futures contracts are actively traded on the   
A. Euro.  
B. British pound.  
C. Drachma.  
**D.** Euro and British pound.  
E. All of these are correct.

The indices are listed in Table 22.1.

 23. Foreign currency futures contracts are actively traded on the   
A. Japanese yen.  
B. Australian dollar.  
C. Brazilian real.  
D. Japanese yen and Australian dollar.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 24. Metals and energy currency futures contracts are actively traded on   
A. gold.  
B. silver.  
C. propane.  
D. gold and silver.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 25. Metals and energy currency futures contracts are actively traded on   
A. copper.  
B. platinum.  
C. weather.  
D. copper and platinum.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

26. Interest rate futures contracts are actively traded on the   
A. Eurodollars.  
B. Euroyen.  
C. Sterling.  
D. Eurodollars and Euroyen.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

 27. To exploit an expected increase in interest rates, an investor would most likely   
**A.** sell Treasury bond futures.  
B. take a long position in wheat futures.  
C. buy S&P 500 index futures.  
D. take a long position in Treasury bond futures.  
E. None of these is correct.

If interest rates rise, bond prices decrease. As bond prices decrease, the short position gains. Thus, if you are bearish about bond prices, you might speculate by selling T-bond futures contracts.

 28. An investor with a long position in Treasury notes futures will profit if   
**A.** interest rates decline.  
B. interest rate increase.  
C. the prices of Treasury notes increase.  
D. the price of the long bond increases.  
E. None of these is correct.

Profit to long position = Spot price at maturity − original futures price.

 29. To hedge a long position in Treasury bonds, an investor most likely would   
A. buy interest rate futures.  
B. sell S&P futures.  
**C.** sell interest rate futures.  
D. buy Treasury bonds in the spot market.  
E. None of these is correct.

By taking the short position, the hedger is obligated to deliver T-bonds at the contract maturity date for the current futures price, which locks in the sales price for the bonds and guarantees that the total value of the bond-plus-futures position at the maturity date is the futures price.

 30. An increase in the basis will \_\_\_\_\_\_\_\_\_\_ a long hedger and \_\_\_\_\_\_\_\_\_\_ a short hedger.   
A. hurt; benefit  
B. hurt; hurt  
**C.** benefit; hurt  
D. benefit; benefit  
E. benefit; have no effect upon

If a contract and an asset are to be liquidated early, basis risk exists and futures price and spot price need not move in lockstep before delivery date. An increase in the basis will hurt the short hedger and benefit the long hedger.

31. Which one of the following statements regarding "basis" is **not** true?   
A. The basis is the difference between the futures price and the spot price.  
B. The basis risk is borne by the hedger.  
**C.** A short hedger suffers losses when the basis decreases.  
D. The basis increases when the futures price increases by more than the spot price.  
E. None of these is true.

If you think one asset is overpriced relative to another, you sell the overpriced asset and buy the other one.

 32. Which of the following statements regarding "basis" is most true?   
A. The basis is the difference between the futures price and the spot price.  
B. The basis risk is borne by the hedger.  
C. A short hedger suffers losses when the basis decreases.  
D. The basis increases when the futures price increases by more than the spot price.  
**E.** The basis is the difference between the futures price and the spot price, the basis risk is borne by the hedger, and the basis increases when the futures price increases by more than the spot price

The basis is the difference between the futures price and the spot price and is borne by the hedger. The basis increases when the futures price increases by more than the spot price.

 33. If you determine that the S&P 500 Index futures is overpriced relative to the spot S&P 500 Index you could make an arbitrage profit by   
A. buying all the stocks in the S&P 500 and selling put options on the S&P 500 index.  
B. selling short all the stocks in the S&P 500 and buying S&P Index futures.  
C. selling all the stocks in the S&P 500 and buying call options on the S&P 500 index.  
**D.** selling S&P 500 Index futures and buying all the stocks in the S&P 500.  
E. None of these is correct.

If you think one asset is overpriced relative to another, you sell the overpriced asset and buy the other one.

 34. On January 1, the listed spot and futures prices of a Treasury bond were 93.8 and 93.13. You purchased $100,000 par value Treasury bonds and sold one Treasury bond futures contract. One month later, the listed spot price and futures prices were 94 and 94.09, respectively. If you were to liquidate your position, your profits would be   
**A.** $125 loss.  
B. $125 profit.  
C. $12.50 loss.  
D. $1,250 loss.  
E. None of these is correct.

On bonds: $94,000 − $93,250 = $750; On futures: $93,406.25 − $94,281.25 = −$875; Net profits: $750 − $875 = −$125.

35. You purchased one silver future contract at $3 per ounce. What would be your profit (loss) at maturity if the silver spot price at that time is $4.10 per ounce? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $5.50 profit  
**B.** $5,500 profit  
C. $5.50 loss  
D. $5,500 loss  
E. None of these is correct.

$4.10 − $3.00 = $1.10 × 5,000 = $5,500.

 36. You sold one silver future contract at $3 per ounce. What would be your profit (loss) at maturity if the silver spot price at that time is $4.10 per ounce? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $5.50 profit  
B. $5,500 profit  
C. $5.50 loss  
**D.** $5,500 loss  
E. None of these is correct.

$3.00 − $4.10 = −$1.10 × 5,000 = −$5,500.

 37. You purchased one corn future contract at $2.29 per bushel. What would be your profit (loss) at maturity if the corn spot price at that time were $2.10 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $950 profit  
B. $95 profit  
**C.** $950 loss  
D. $95 loss  
E. None of these is correct.

$2.10 − $2.29 = −$0.19 × 5,000 = −$950.

 38. You sold one corn future contract at $2.29 per bushel. What would be your profit (loss) at maturity if the corn spot price at that time were $2.10 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
**A.** $950 profit  
B. $95 profit  
C. $950 loss  
D. $95 loss  
E. None of these is correct.

$2.29 − $2.10 = $0.19 × 5,000 = $950.

39. You sold one wheat future contract at $3.04 per bushel. What would be your profit (loss) at maturity if the wheat spot price at that time were $2.98 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $30 profit  
**B.** $300 profit  
C. $300 loss  
D. $30 loss  
E. None of these is correct.

$3.04 − $2.98 = $0.06 × 5,000 = $300.

 40. You purchased one wheat future contract at $3.04 per bushel. What would be your profit (loss) at maturity if the wheat spot price at that time were $2.98 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $30 profit  
B. $300 profit  
**C.** $300 loss  
D. $30 loss  
E. None of these is correct.

$2.98 − $3.04 = −$0.06 × 5,000 = −$300.

 41. On January 1, you sold one April S&P 500 index futures contract at a futures price of 420. If on February 1 the April futures price were 430, what would be your profit (loss) if you closed your position (without considering transactions costs)?   
**A.** $2,500 loss  
B. $10 loss  
C. $2,500 profit  
D. $10 profit  
E. None of these is correct

$420 − $430 = −$10 × 250 = −$2,500.

42. On January 1, you bought one April S&P 500 index futures contract at a futures price of 420. If on February 1 the April futures price were 430, what would be your profit (loss) if you closed your position (without considering transactions costs)?   
A. $2,500 loss  
B. $10 loss  
**C.** $2,500 profit  
D. $10 profit  
E. None of these is correct

$430 − $420 = $10 × 250 = $2,500.

43. You sold one soybean future contract at $5.13 per bushel. What would be your profit (loss) at maturity if the wheat spot price at that time were $5.26 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $65 profit  
B. $650 profit  
**C.** $650 loss  
D. $65 loss  
E. None of these is correct.

$5.13 − $5.26 = −$0.13 × 5,000 = −$650.

44. You bought one soybean future contract at $5.13 per bushel. What would be your profit (loss) at maturity if the wheat spot price at that time were $5.26 per bushel? Assume the contract size is 5,000 ounces and there are no transactions costs.   
A. $65 profit  
**B.** $650 profit  
C. $650 loss  
D. $65 loss  
E. None of these is correct.

$5.26 − $5.13 = $0.13 × 5,000 = $650.

 45. On April 1, you bought one S&P 500 index futures contract at a futures price of 950. If on June 15th the futures price were 1012, what would be your profit (loss) if you closed your position (without considering transactions costs)?   
A. $1,550 loss  
B. $15,550 loss  
**C.** $15,550 profit  
D. $1,550 profit  
E. None of these is correct

$1012 − $950 = $62 × 250 = $15,500.

 46. On April 1, you sold one S&P 500 index futures contract at a futures price of 950. If on June 15th the futures price were 1012, what would be your profit (loss) if you closed your position (without considering transactions costs)?   
A. $1,550 loss  
**B.** $15,550 loss  
C. $15,550 profit  
D. $1,550 profit  
E. None of these is correct

$950 − $1012 = −$62 × 250 = −$15,500.

47. The expectations hypothesis of futures pricing   
A. is the simplest theory of futures pricing.  
B. states that the futures price equals the expected value of the future spot price of the asset.  
C. is not a zero sum game.  
**D.** is the simplest theory of futures pricing and states that the futures price equals the expected value of the future spot price of the asset.  
E. is the simplest theory of futures pricing and is not a zero sum game.

The expectations hypothesis relies on the concept of risk neutrality; i.e., if all market participants are risk neutral, they should agree on a futures price that provides an expected profit of zero to all parties.

 48. Normal backwardation   
A. maintains that for most commodities, there are natural hedgers who desire to shed risk.  
B. maintains that speculators will enter the long side of the contract only if the futures price is below the expected spot price.  
C. assumes that risk premiums in the futures markets are based on systematic risk.  
**D.** maintains that for most commodities, there are natural hedgers who desire to shed risk and maintains that speculators will enter the long side of the contract only if the futures price is below the expected spot price.  
E. maintains that speculators will enter the long side of the contract only if the futures price is below the expected spot price and assumes that risk premiums in the futures markets are based on systematic risk.

Risk premiums in this theory are based on total variability.

 49. Contango   
A. holds that the natural hedgers are the purchasers of a commodity, not the suppliers.  
B. is a hypothesis polar to backwardation.  
C. holds that FO must be less than (PT).  
D. holds that the natural hedgers are the purchasers of a commodity, not the suppliers and holds that FO must be less than (PT).  
**E.** holds that the natural hedgers are the purchasers of a commodity, not the suppliers and is a hypothesis polar to backwardation.

Contango holds that the natural hedgers are the purchasers of a commodity, not the suppliers and is a hypothesis polar to backwardation.

 50. Delivery of stock index futures   
A. is never made.  
**B.** is made by a cash settlement based on the index value.  
C. requires delivery of 1 share of each stock in the index.  
D. is made by delivering 100 shares of each stock in the index.  
E. is made by delivering a value-weighted basket of stocks.

Stock index futures are cash-settled, similar to the procedure used for index options.

51. The establishment of a futures market in a commodity should not have a major impact on spot prices because   
A. the futures market is small relative to the spot market.  
B. the futures market is illiquid.  
**C.** futures are a zero-sum game  
D. the futures market is large relative to the spot market.  
E. most futures contracts do not take delivery.

Losses and gains to futures contracts net to zero, and thus should not impact spot prices.

 52. Given a stock index with a value of $1,500, an anticipated dividend of $62 and a risk-free rate of 5.75%, what should be the value of one futures contract on the index?   
A. $1343.40  
B. $62.00  
C. $1418.44  
**D.** $1524.25  
E. None of these is correct

F = 1500\*(1 + .0575) − 62; F = 1524.25.

 53. If a trader holding a long position in corn futures fails to meet the obligations of a futures contract, the party that is hurt by the failure is   
A. the offsetting short trader.  
B. the corn farmer.  
**C.** the clearinghouse.  
D. the broker.  
E. the commodities dealer.

The clearinghouse acts as a middle party to every transaction, and bears any losses arising from failure to meet contractual obligations.

 54. Open interest includes   
A. only contracts with a specified delivery date.  
B. the sum of short and long positions.  
C. the sum of short, long and clearinghouse positions.  
D. the sum of long **or** short positions and clearinghouse positions.  
**E.** only long **or** short positions but not both.

Open interest is the number of contracts outstanding across all delivery dates for a given contract. Long and short positions are not counted separately, and the clearinghouse position is not counted because it nets to zero.

 55. The process of marking-to-market   
A. posts gains or losses to each account daily.  
B. may result in margin calls.  
C. impacts only long positions.  
D. All of these are correct.  
**E.** posts gains or losses to each account daily and may result in margin calls.

Marking-to-market effectively puts futures contracts on a "pay as you go" basis.

56. Futures contracts in the U.S. are regulated by   
**A.** the Commodities Futures Trading Corporation.  
B. the Chicago Board of Trade.  
C. the Chicago Mercantile Exchange.  
D. the Federal Reserve.  
E. the Securities and Exchange Commission.

The CFTC, a federal agency, sets rules and requirements for futures trading.

 57. Taxation of futures trading gains and losses   
**A.** is based on cumulative year-end profits or losses.  
B. occurs based on the date contracts are sold or closed.  
C. can be timed to offset stock portfolio gains and losses.  
D. is based on the contract holding period.  
E. None of these is correct.

Futures profits and losses are taxed based on cumulative year-end value due to marking-to-market procedures.

 58. Speculators may use futures markets rather than spot markets because   
A. transactions costs are lower in futures markets.  
B. futures markets provide leverage.  
C. spot markets are less efficient.  
D. futures markets are less efficient.  
**E.** transactions costs are lower in futures markets and futures markets provide leverage.

Futures markets allow speculators to benefit from leverage and minimize transactions costs. Both markets should be equally price-efficient.

 59. Given a stock index with a value of $1,000, an anticipated dividend of $30 and a risk-free rate of 6%, what should be the value of one futures contract on the index?   
A. $943.40  
B. $970.00  
**C.** $1030.00  
D. $915.09  
E. $1000.00

F = 1000\*(1.06) − 30; F = 1030.00.

 60. Given a stock index with a value of $1,125, an anticipated dividend of $33 and a risk-free rate of 4%, what should be the value of one futures contract on the index?   
**A.** $1137.00  
B. $1070.00  
C. $993.40  
D. $995.09  
E. $1000.00

F = 1125\*(1.04) − 33; F = 1137.00.

61. Given a stock index with a value of $1100, an anticipated dividend of $27 and a risk-free rate of 3%, that should be the value of one futures contract on the index?   
A. $943.40  
B. $970.00  
C. $913.40  
**D.** $1106.00  
E. $1000.00

F = 1100\*(1.03) − 27; F = 1106.00.

 62. Given a stock index with a value of $1,200, an anticipated dividend of $45 and a risk-free rate of 6%, what should be the value of one futures contract on the index?   
**A.** $1227.00  
B. $1070.00  
C. $993.40  
D. $995.09  
E. $1000.00

F = 1200\*(1.06) − 45; F = 1227.00.

 63. Which of the following items is specified in a futures contract?   
I) the contract size  
II) the maximum acceptable price range during the life of the contract  
III) the acceptable grade of the commodity on which the contract is held  
IV) the market price at expiration  
V) the settlement price   
A. I, II, and IV  
**B.** I, III, and V  
C. I and V  
D. I, IV, and V  
E. I, II, III, IV, and V

The maximum price range and the market price at expiration will be determined by the market rather than specified in the contract.

 64. Which of the following items is not specified in a futures contract?   
I) the contract size  
II) the maximum acceptable price range during the life of the contract  
III) the acceptable grade of the commodity on which the contract is held  
IV) the market price at expiration  
V) the settlement price   
**A.** II and IV  
B. I, III, and V  
C. I and V  
D. I, IV, and V  
E. I, II, III, IV, and V

The maximum price range and the market price at expiration will be determined by the market rather than specified in the contract.

65. With regard to futures contracts, what does the word "margin" mean?   
A. It is the amount of the money borrowed from the broker when you buy the contract.  
B. It is the maximum percentage that the price of the contract can change before it is marked to market.  
C. It is the maximum percentage that the price of the underlying asset can change before it is marked to market.  
**D.** It is a good-faith deposit made at the time of the contract's purchase or sale.  
E. It is the amount by which the contract is marked to market.

The exchange guarantees the performance of each party, so it requires a good-faith deposit. This helps avoid the cost of credit checks.

66. Which of the following is **true** about profits from futures contracts?   
A. The person with the long position gets to decide whether to exercise the futures contract and will only do so if there is a profit to be made.  
B. It is possible for both the holder of the long position and the holder of the short position to earn a profit.  
C. The clearinghouse makes most of the profit.  
**D.** The amount that the holder of the long position gains must equal the amount that the holder of the short position loses.  
E. Holders of short positions can recognize profits by making delivery early.

The net profit on the contract is zero—it is a zero-sum game.

 67. Which of the following is **false** about profits from futures contracts?   
A. The person with the long position gets to decide whether to exercise the futures contract and will only do so if there is a profit to be made.  
B. It is possible for both the holder of the long position and the holder of the short position to earn a profit.  
C. The clearinghouse makes most of the profit.  
D. The amount that the holder of the long position gains must equal the amount that the holder of the short position loses.  
**E.** The person with the long position gets to decide whether to exercise the futures contract and will only do so if there is a profit to be made; it is possible for both the holder of the long position and the holder of the short position to earn a profit; and the clearinghouse makes most of the profit

The net profit on the contract is zero—it is a zero-sum game.

68. Some of the newer futures contracts include   
I) fashion futures.  
II) weather futures.  
III) electricity futures.  
IV) entertainment futures.   
A. I and II  
**B.** II and III  
C. III and IV  
D. I, II, and III  
E. I, III, and IV

Weather and electricity futures are mentioned in the textbook as recent innovations.

 69. Who guarantees that a futures contract will be fulfilled?   
A. the buyer  
B. the seller  
C. the broker  
**D.** the clearinghouse  
E. nobody

Once two parties have agreed to enter the transaction, the clearinghouse becomes the buyer and seller of the contract and guarantees its completion.

 70. If you took a long position in a pork bellies futures contract and then forgot about it, what would happen at the expiration of the contract?   
A. Nothing - the seller understands that these things happen.  
B. You would wake up to find the pork bellies on your front lawn.  
C. Your broker would send you a nasty letter.  
**D.** You would be notified that you owe the holder of the short position a certain amount of cash.  
E. You would be notified that you have to pay a penalty in addition to the regular cost of the pork bellies.

The item is usually not delivered, but cash settlement can be made through the use of warehouse receipts. You are still obligated to fulfill the contract and give the holder of the short position the value of the pork bellies.

 71. If a trader holding a long position in oil futures fails to meet the obligations of a futures contract, the party that is hurt by the failure is   
A. the offsetting short trader.  
B. the oil producer.  
**C.** the clearinghouse.  
D. the broker.  
E. the commodities dealer.

The clearinghouse acts as a middle party to every transaction, and bears any losses arising from failure to meet contractual obligations.

 72. A trader who has a \_\_\_\_\_\_\_\_\_\_ position in oil futures believes the price of oil will \_\_\_\_\_\_\_\_\_\_ in the future.   
A. short; increase  
B. long; increase  
C. short; decrease  
D. long; stay the same  
**E.** long; increase and short; decrease

The trader holding the long position (the person who will purchase the goods) will profit from a price increase. Profit to long position = Spot price at maturity − Original futures price.

73. A trader who has a \_\_\_\_\_\_\_\_\_\_ position in gold futures wants the price of gold to \_\_\_\_\_\_\_\_\_\_ in the future.   
A. long; decrease  
**B.** short; decrease  
C. short; stay the same  
D. short; increase  
E. long; stay the same

Profit to short position = Original futures price − Spot price at maturity. Thus, the person in the short position profits if the price of the commodity declines in the future.

 74. You hold one long oil futures contract that expires in April. To close your position in oil futures before the delivery date you must   
A. buy one May oil futures contract.  
B. buy two April oil futures contract.  
**C.** sell one April oil futures contract.  
D. sell one May oil futures contract.  
E. None of these is correct.

The long position is considered the buyer; to close out the position one must take a reversing position, or sell the contract.

 75. Financial futures contracts are actively traded on the following indices **except**   
A. the All ordinary index.  
B. the DAX 30 index.  
C. the CAC 40 Index.  
D. the Toronto 35 Index.  
**E.** All of these indices have actively traded futures contracts.

The indices are listed in Table 22.1.

 76. Financial futures contracts are actively traded on the following indices   
A. the All ordinary index.  
B. the DAX 30 index.  
C. the CAC 40 Index.  
D. the Toronto 35 Index.  
**E.** All of these are correct.

The indices are listed in Table 22.1.

77. To exploit an expected decrease in interest rates, an investor would most likely   
**A.** buy Treasury bond futures.  
B. take a long position in wheat futures.  
C. buy S&P 500 index futures.  
D. take a short position in Treasury bond futures.  
E. None of these is correct.

If interest rates decrease, bond prices increase. As bond prices increase, the long position gains. Thus, if you are bullish about bond prices, you might speculate by buying T-bond futures contracts.

78. An investor with a short position in Treasury notes futures will profit if   
A. interest rates decline.  
**B.** interest rate increase.  
C. the prices of Treasury notes increase.  
D. the price of the long bond increases.  
E. None of these is correct.

Profit to long position = Spot price at maturity − original futures price.

 79. To hedge a short position in Treasury bonds, an investor most likely would   
A. ignore interest rate futures.  
B. buy S&P futures.  
**C.** buy interest rate futures.  
D. sell Treasury bonds in the spot market.  
E. None of these is correct.

By taking the long position, the hedger is obligated to accept delivery of T-bonds at the contract maturity date for the current futures price, which locks in the sales price for the bonds and guarantees that the total value of the bond-plus-futures position at the maturity date is the futures price.

 80. A decrease in the basis will \_\_\_\_\_\_\_\_\_\_ a long hedger and \_\_\_\_\_\_\_\_\_\_ a short hedger.   
**A.** hurt; benefit  
B. hurt; hurt  
C. benefit; hurt  
D. benefit; benefit  
E. benefit; have no effect upon

If a contract and an asset are to be liquidated early, basis risk exists and futures price and spot price need not move in lockstep before delivery date. A decrease in the basis will benefit the short hedger and hurt the long hedger.

 81. Which one of the following statements regarding "basis" is true?   
A. the basis is the difference between the futures price and the spot price.  
B. the basis risk is borne by the hedger.  
C. a short hedger suffers losses when the basis decreases.  
D. the basis increases when the futures price increases by more than the spot price.  
**E.** the basis is the difference between the futures price and the spot price; the basis risk is borne by the hedger,; and the basis increases when the futures price increases by more than the spot price.

A decrease in the basis will benefit the short hedger.

82. If you determine that the DAX-30 index futures is overpriced relative to the spot DAX-30 index you could make an arbitrage profit by   
A. buying all the stocks in the DAX-30 and selling put options on the DAX-30 index.  
B. selling short all the stocks in the DAX-30 and buying DAX-30 futures.  
C. selling all the stocks in the DAX-30 and buying call options on the DAX-30 index.  
**D.** selling DAX-30 index futures and buying all the stocks in the DAX-30.  
E. None of these is correct.

If you think one asset is overpriced relative to another, you sell the overpriced asset and buy the other one.

 83. If you determine that the DAX-30 index futures is under priced relative to the spot DAX-30 index you could make an arbitrage profit by   
A. buying all the stocks in the DAX-30 and selling put options on the DAX-30 index.  
B. selling short all the stocks in the DAX-30 and buying DAX-30 futures.  
C. selling all the stocks in the DAX-30 and buying call options on the DAX-30 index.  
**D.** buying DAX-30 index futures and selling all the stocks in the DAX-30.  
E. None of these is correct.

If you think one asset is overpriced relative to another, you sell the overpriced asset and buy the other one.

 84. On January 1, the listed spot and futures prices of a Treasury bond were 95.4 and 95.6. You sold $100,000 par value Treasury bonds and purchased one Treasury bond futures contract. One month later, the listed spot price and futures prices were 95 and 94.4, respectively. If you were to liquidate your position, your profits would be   
A. $125 loss.  
B. $125 profit.  
C. $1,060.50 loss.  
D. $1,062.50 profit.  
**E.** None of these is correct.

On bonds: $95,125 − $95,000 = $125; On futures: $94,125.00 − $95,187.50 = −$1,062.50; Net profits: $125 − $1,062.50; = −$937.50.

 85. You purchased one oil future contract at $70 per barrel. What would be your profit (loss) at maturity if the oil spot price at that time is $73.12 per barrel? Assume the contract size is 1,000 barrels and there are no transactions costs.   
A. $3.12 profit  
B. $31.20 profit  
C. $3.12 loss  
D. $31.20 loss  
**E.** None of these is correct.

$73.12 − $70.00 = $3.12 × 1,000 = $3,120.

86. You sold one oil future contract at $70 per barrel. What would be your profit (loss) at maturity if the oil spot price at that time is $73.12 per barrel? Assume the contract size is 1,000 barrels and there are no transactions costs.   
A. $3.12 profit  
B. $31.20 profit  
C. $3.12 loss  
D. $31.20 loss  
**E.** None of these is correct.

$70.00 − $73.12 = -$3.12 × 1,000 = −$3,120.

**Short Answer Questions**

87. Describe the differences between futures and forward contracts.

Futures contracts are traded on the organized exchanges and are standardized as to the contract size, the acceptable grade of the commodity, and the contract delivery date.  
A forward contract is only a commitment to contract in the future. No money exchanges hands initially. The contract is for a deferred delivery of an asset at an agreed upon price.  
  
Feedback: The purpose of this question is to insure that the student understands the basic differences between futures and forward contracts.

 88. Distinguish between the short and long positions in futures transactions.

The trader taking the long position commits to purchase the commodity on the delivery date. The trader taking the short position commits to delivery of the commodity at contract maturity.  
The trader in the long position "buys" the contract; the trader in short position "sells" the contract. However, no money exchanges hands when the contract is initiated.  
The trader holding the long position profits from price increases. The trader in the short position profits from price decreases. The profits and losses of the two positions exactly offset each other; the futures market, in the aggregate, is a zero sum game.  
  
Feedback: The purpose of this question is to insure that the student understands the meanings of these terms as related to the futures markets.

89. Discuss marking to market and margin accounts in the futures market.

When opening an account, the trader establishes a margin account. The margin deposit may be cash or near cash, such as T-bills. Both sides of the contract must post margin. The initial margin is between 5 and 15% of the total value of the contract. The more volatile the asset, the higher the margin requirement. The clearinghouse recognizes profits and losses at the end of each trading day; this daily settlement is marking to market, thus proceeds accrue to the trader's account immediately; maturity date does not govern the realization of profits or losses.  
  
Feedback: Margin requirements and marking to market differ in the futures markets from that of the markets previously studied. This question is designed to ascertain whether the student understands these differences.

 90. You purchased the following futures contract today at the settlement price listed in the Wall Street Journal. Answer the questions below regarding the contract.  
    
- What is the total value of the futures contract?  
- If there is a 10% margin requirement how much do you have to deposit?  
- Suppose the price of the futures contract changes as shown in the following table.  
- Enter the relevant information into the table. Show your calculations.  
- Explain why the account is marked-to-market daily.  
 

The answers are shown below.  
    
The total value of the contract is $9,174, as shown in the table. If there is a 10% margin requirement, you will have to deposit $917.40 in cash or securities.  
The contract is marked to market daily and profits or losses are posted in the account. The contract keeps pace with market activity and doesn't change value all at once at the maturity date. The marking-to-market process protects the clearinghouse because the margin percentage is calculated daily and if it falls below the maintenance margin a margin call can be issued. If the investor doesn't meet the call the clearinghouse can close out enough of the trader's position to restore the margin.  
  
Feedback: This question tests whether the student understands marking to market.

 91. Describe the types of traders that are active in the futures markets. Explain why each type is in the markets and how their goals differ. Give an example of how each might use the market.

The two types of traders are hedgers and speculators. Hedgers use the markets to protect themselves by limiting their risk. They take long or short positions to lock in the most favorable purchase price or selling price at the time they enter the contract. An example of a hedger would be a jewelry company that anticipates a need for a large quantity of gold in the future. The company will have to purchase the gold and if it wants to protect itself from large price increases it can take a long position in a gold futures contract today. If gold prices fall rather than rising, the company can sell an equivalent contract before the maturity date. If prices rise, the company can take delivery of the gold at a more favorable price than the spot price at the time of maturity.  
Speculators dominate the futures market. Only 1% to 3% of futures market participants actually plan to take delivery of the asset. The rest are speculators who plan to offset their positions prior to expiration of the contract. A speculator will take a long position if he expects prices to increase. As the value of the futures contract rises, the holder of the long position gains and the holder of the short position loses. The speculator can sell the contract for more than he paid in this case. Speculators buy futures contracts rather than the underlying assets because transaction costs are much lower. The speculator also benefits from leverage since only a small percentage of the total contract value is required to be posted as margin.  
  
Feedback: This question tests whether the student understands the main characters in the futures markets; the reasons they use the markets; and the role each of them plays in the market's operation.