

**LO.a: Explain the main functions of the financial system.**

1. Which of the following is *least likely* a function of the financial system?
  - A. Allow entities to trade assets currently or in the future.
  - B. Allocate capital to its most efficient use.
  - C. Prevent entities to trade on information.
2. Which of the following is *least likely* a function of the financial system?
  - A. To allow financial market participants to trade based on available information.
  - B. To regulate arbitrageurs' profits (excess returns).
  - C. To facilitate borrowing by businesses to fund current operations.

**LO.b: Describe classifications of assets and markets.**

3. Which of the following is *least likely* a real asset?
  - A. Currencies.
  - B. Commodities.
  - C. Real estate.
4. Which of the following statements is *least* accurate?
  - A. Private securities are often illiquid and not subject to regulation.
  - B. In a secondary market, investors buy and sell securities among themselves.
  - C. Money markets refer to markets for equity securities.

**LO.c: Describe the major types of securities, currencies, contracts, commodities, and real assets that trade in organized markets, including their distinguishing characteristics and major subtypes.**

5. Which of the following is *most likely* a drawback of the forward contract?
  - A. Difficult to exit from contract once entered.
  - B. Long party to deposit initial amount.
  - C. Periodic payments made by the party during contract in case of adverse movements.
6. Which of the following is *least likely* to be included in a fixed-income securities fund?
  - A. Commercial paper.
  - B. Repurchase agreements.
  - C. Warrants.
7. Peter decides whether to buy, hold, or sell the shares of an index fund based on a predictive macro - economic model that he has created. He hopes to achieve abnormal returns using this model. Which of the following labels *most appropriately* describe Peter?
  - A. Arbitrageur.
  - B. Information-motivated trader.
  - C. Investor.

8. Robert is close to retirement and has savings of \$200,000. Using these funds he creates a portfolio of large-cap, dividend-paying stocks and investment grade corporate bonds. Robert would *best* be characterized as a (n):
- A. hedger.
  - B. investor.
  - C. information-motivated trader.
9. Elena is the owner of a textile company in London. Her company has recently generated revenue by selling jeans to a customer in Pakistan and will be paid in Pakistani Rupees (PKR) in ninety days. Elena is concerned about the possibility of the PKR depreciating more than expected against the UK Pounds (GBP). Therefore, she is planning to sell three-month futures contracts on the PKR. The seller of such contracts generally gains when the PKR depreciates against the GBP. If Elena takes a short position in these future contracts, she would *most appropriately* be described as a(n):
- A. hedger.
  - B. investor.
  - C. arbitrageur.
10. Lisa primarily invests in stocks and bonds. If she adds private equity to her portfolio, that would *best* be characterized as a transaction in the:
- A. derivative investment market.
  - B. traditional investment market.
  - C. alternative investment market.
11. Edward invests in stocks and commercial bonds with maturities of 5 to 10 years. His holdings are *best* described as:
- A. capital market instruments.
  - B. money market instruments.
  - C. intermediate-term debt instruments.
12. A fund invests primarily in fixed announces that it is offering 10 million shares to the public at \$55.75 each. This transaction is *most likely* a sale in the:
- A. futures market.
  - B. primary market.
  - C. secondary market.
13. A mutual fund invests primarily in fixed-income securities. Which of the following is *least likely* to be a part of this fund?
- A. Warrants.
  - B. Treasury bills.
  - C. Repurchase agreements.
14. After you completed your presentation on exchange traded funds, a student from the audience asked you to explain the differences between open-end and closed-end funds. Which of the following will *least likely* be included in your explanation?
- A. Shares in closed-end funds can be bought and sold any time during the trading day.

- B. Open-end funds are more likely to trade at a discount to NAV while closed-end funds generally trade close to NAV.
  - C. When selling shares, investors in an open-end fund sell the shares back to the fund whereas investors in a closed-end fund sell the shares to others in the secondary market.
15. Which of the following is *most likely* a limitation of a forward contract?
- A. It is difficult to exit from a forward contract, once you have entered into an agreement.
  - B. A forward contract requires the long party to deposit an initial amount with the short party.
  - C. If the price of the underlying asset moves adversely from the perspective of the long party, periodic payments must be made to the short party.
16. Steve is planning to start trading in commodities. He has been reading about the use of futures contracts on commodities. Which of the following is Steve *least likely* to find associated with a futures contract?
- A. Existence of counterparty risk.
  - B. Standardized contractual terms.
  - C. Initial margin requirement.
17. Rossi Inc. is based in Italy and exports machinery parts to the United States. Rossi is expecting to receive \$40 million in three months from a customer. The firm converts all its foreign currency receipts into euros. The chief financial officer wants to hedge the risk of an adverse FX movement. What hedging transaction will *most likely* achieve this objective?
- A. Selling dollars in the forward market.
  - B. Selling euros in the forward market.
  - C. Buy call options on dollars.
18. A textile owner requires substantial amount of cotton. The textile owner and a cotton producer have entered into an agreement for the textile owner to buy and the producer to supply a given quantity of cotton six months later at a price agreed upon today. This agreement is a (n):
- A. options contract.
  - B. forward contract.
  - C. swap.
19. Shares in GX Corp. are currently trading at \$213. Regis has just bought call options on shares of GX for a premium of \$3 per share. The call options expire in six months and have an exercise price of \$220 per share. On the expiration date, Regis will exercise the call options, considering no transaction costs, if and only if the shares of GX are trading:
- A. below \$220 per share.
  - B. above \$220 per share.
  - C. above \$223 per share.
20. Which of the following statements about exchange-traded funds is *least likely* correct?

- A. Exchange-traded funds are not backed by any asset held by the fund.
  - B. The investment companies that create exchange-traded funds are financial intermediaries.
  - C. The transaction costs of trading shares of exchange-traded funds are generally lower than the combined costs of trading the underlying assets of the fund.
21. Clinton works for a hedge fund. He is a finance graduate and specializes in finding profit opportunities that are the result of inefficiencies in the market for convertible bonds—bonds that can be converted into a predetermined amount of a company's common stock. Clinton tries to find convertibles that are priced inefficiently relative to the underlying stock. The trading strategy involves the simultaneous purchase of the convertible bond and the short sale of the underlying common stock. The above process could *best* be described as:
- A. investing.
  - B. arbitrage.
  - C. securitization.
22. Which of the following is *least likely* a pooled investment vehicle?
- A. Asset-backed securities.
  - B. Convertible debt.
  - C. Hedge funds.

**LO.d: Describe types of financial intermediaries and services that they provide.**

23. Which of the following are *most likely* to provide liquidity service to their clients?
- A. Brokers.
  - B. Dealers.
  - C. Exchanges.
24. The guarantee of contract performance in futures market is *most likely* provided by:
- A. clearing house.
  - B. futures exchange.
  - C. Securities and Exchange Commission.
25. Which of the following statements is *least* accurate?
- A. Exchanges sometimes act as brokers by providing electronic exchange matching.
  - B. Alternative trading system that reveal current client orders are known as dark pools.
  - C. Dealers facilitate trading by buying for and selling from their own inventory.

**LO.e: Compare positions an investor can take in an asset.**

26. Rafael sold a call option on shares of the ABC Group. A few days ago he bought a put option on ABC shares on a friend's recommendation. The call and put options have the same exercise price, expiration date, and number of shares underlying. Considering both positions, Rafael's exposure to the stock of the ABC Group is:
- A. long.
  - B. short.

C. neutral.

27. Margaret estimates the intrinsic value of a stock to be \$37 which is currently selling at \$46.

Margaret will *most likely*:

- A. place a stop-order to buy.
- B. place a market-order to buy.
- C. place a short-sale order.

28. Which of the following statements is *least* accurate?

- A. An investor who has the right under a contract to purchase an asset is said to have a long position.
- B. Simultaneously borrowing and selling securities through a broker is referred to as covering the short position.
- C. In general investors who are long benefit from an increase in the price of an asset.

**LO.f: Calculate and interpret the leverage ratio, the rate of return on a margin transaction, and the security price at which the investor would receive a margin call.**

29. An investor buys stock on margin and holds the position for exactly one year:

Shares purchased: 300

Purchase price: \$12/share

Commission on purchase and sale of shares: 0

Call money rate: 5%

Dividend: \$0.80/share

Leverage ratio: 2

Total return on equity investment: 30%

Assuming that the interest on the loan and the dividend are both paid at the end of the year, the price at which the investor sold the stock is *closest* to:

- A. \$13.3.
- B. \$14.4.
- C. \$14.9.

30. What is the leverage ratio associated with a margin requirement of 45%?

- A. 1.45.
- B. 0.45.
- C. 2.22.

31. Alex has purchased 100 shares of a non-dividend paying firm on margin at a price of \$60 per share. The leverage ratio is 1.5. Six months later, he sells these shares at \$70 per share. What was the return to Alex during the six-month period, considering no transaction cost or interest on borrowing?

- A. 16.67 percent.
- B. 66.67 percent.
- C. 25.00 percent.

32. Susan purchased 600 shares of a company XYZ at \$22 per share. The stock was bought on 80 percent margin. One month later, Susan had to pay interest on the amount borrowed at a rate of 4 percent per month. At that time, Susan received a dividend of \$0.60 per share. Immediately after that she sold the shares at \$18 per share. She paid commissions of \$5 on the purchase and \$5 on the sale of the stock. What was the rate of return on this investment for the one-month period?
- A. -19.4 percent.
  - B. -20.4 percent.
  - C. -24.9 percent.
33. Rogers believes the price of ABC Corp. stock will go up in the near future. He has decided to buy 100 shares of ABC Corp. at the current market price of €50. The initial margin requirement is 45 percent. Which of the following is the *most appropriate* statement regarding the margin requirement that Rogers is subject to on this long position?
- A. He will need to contribute €2,250 as margin.
  - B. He will need to contribute €2,750 as margin.
  - C. He will only need to leave the proceeds from the long buy as deposit and does not need to contribute any additional funds.
34. The current price of a stock is \$30 per share. You have \$20,000 to invest. You borrow an additional \$20,000 from your broker and invest \$40,000 in the stock. If the maintenance margin is 40 percent, at what price will a margin call first occur?
- A. \$12.00.
  - B. \$25.00.
  - C. \$29.71.
35. A trader buys 500 shares of a stock on margin at \$25 a share using an initial leverage ratio of 1.50. The maintenance margin requirement for the position is 30 percent. The stock price at which the margin call will occur is *closest* to:
- A. \$10.44.
  - B. \$11.79.
  - C. \$13.13.
36. An investor buys a stock on margin. Assume that the interest on the loan and the dividend are both paid at the end of the holding period. The data related to the transaction are as follows:
- Number of shares: 200
  - Purchase price per share: \$15
  - Leverage ratio: 3
  - Commission: \$0.05 / share
  - Position holding period: 6 months
  - Sale price per share: \$20
  - Call money rate: 5% per year
  - Dividend: \$0.50 / share
- The investor's total return on this investment over the margin holding period is *closest* to:
- A. 55%.
  - B. 78%.

C. 102%.

37. An investor is involved in margin purchasing of 1000 shares of a company that pay an annual dividend of \$1.45 per share. Following details are available regarding his purchase and sale of stock:

Purchase price	\$120
Sale price	\$140
Margin	35%
Call money rate	8%
Transaction commission/share	\$0.2

The annual return made by the investor if he sells his shares exactly after one year is *closest* to:

- A. 18%.
  - B. 27%.
  - C. 35%.
38. Sean has the following information about a stock.
- |                        |         |
|------------------------|---------|
| Price:                 | \$48.00 |
| Leverage ratio:        | 2.00    |
| Price for margin call: | \$34.29 |
- The maintenance margin is *most likely* to be:
- A. 50%.
  - B. 25%.
  - C. 30%.

**LO.g: Compare execution, validity, and clearing instructions.**

39. Which of the following is *most likely* to be cancelled if it cannot be filled (in part or in whole) very quickly?
- A. Good-till-cancelled order.
  - B. Fill-or-kill orders.
  - C. Good-on-close orders.
40. Derek has sold short 150 shares of Walmart at a price of \$52 per share. He also simultaneously places a “good-till-cancelled, stop 60, limit 65 buy” order. If the stock price starts rising sharply what is the maximum possible realized loss assuming no transaction costs?
- A. \$1,200.
  - B. \$1,950.
  - C. Unlimited.
41. You are a research analyst at XYZ brokerage house. Your client owns shares of ABC Corp which are currently trading at \$20 per share. Your technical analysis of the shares indicates a support level of \$17.50 which means that, the price of the share is most likely not to fall below this level. If the price does fall below this level, however, you believe that the price may continue to decline. You have no immediate intent to ask your client to sell the shares

but are concerned about the possibility of a huge loss if the share price declines below the support level as it would seriously hamper the image of your firm. Which of the following types of orders *most appropriately* addresses your concern?

- A. Short sell order.
- B. Good-till-cancelled stop sell order.
- C. Good-till-cancelled stop buy order.

42. Sam has placed a buy market-on-open order—a market order that would automatically be submitted at the market's open tomorrow and would fill at the market price. This order is *most likely* an example of a(an):

- A. execution instruction.
- B. validity instruction.
- C. clearing instruction.

43. Which of the following statements is *least* accurate?

- A. The disadvantage of a limit order is that it might not be filled.
- B. Day orders expire if they are unfilled by the end of the trading day.
- C. Stop sell orders can limit losses on a short position.

**LO.h: Compare market orders with limit orders.**

44. A trader places a market order. The *most likely* reason for that could be that the trader wants to:

- A. obtain the best available price immediately.
- B. obtain the best available price immediately but with an upper limit.
- C. stop losses on existing held securities.

45. Following are the limit orders of market, standing on its book for stock A. The bid and ask sizes are number of shares in hundreds.

Bid Size	Limit Price (\$)	Offer Size
5	2.71	
12	2.82	
4	3.84	
6	3.94	
	5.02	5
	5.10	12
	5.14	8

What is the market?

- A. 2.71 bid, offered at 5.14.
- B. 2.82 bid, offered at 5.10.
- C. 3.94 bid, offered at 5.02.

46. Consider the following limit order book for a stock X.

Bid Size	Limit Price (CHF)	Offer Size
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300	22.80	
800	23.00	
400	23.35	
	23.80	700
	24.10	600
	24.50	700

A new sell order is placed for 200 shares at CHF 23.35. This order is said to:

- A. take the market.
- B. make the market.
- C. make a new market.

47. Currently, the market in a stock is “\$154.62 bid, offered at \$154.71.” Susan places a new buy limit order at \$154.65. This limit order is said to:

- A. take the market.
- B. make the market.
- C. make a new market.

48. Consider an order-driven system that allows hidden orders. The following four sell orders on a particular stock Y are currently in the system’s limit order book. Based on the commonly used order precedence hierarchy, which of these orders will have precedence over others?

Order	Time of arrival (HH:MM:SS)	Limit Price (EUR)	Special Instructions (if any)
I	7:12:01	10.29	
II	7:12:08	10.29	Hidden order
III	7:13:04	10.29	
IV	7:13:49	10.33	

- A. Order I.
- B. Order II.
- C. Order III.

49. Huang Lao has submitted an immediate-or-cancel buy order for 600 shares of a company at a limit price of CNY 84.75. There are two sell limit orders standing in that stock’s order book at that time. One is for 400 shares at a limit price of CNY 84.80 and the other is for 500 shares at a limit price of CNY 84.85. How many shares in Lao’s order would get cancelled?

- A. None (the order would remain open but unfilled).
- B. 300 (300 shares would get filled).
- C. 600 (there would be no fill).

50. For stock X, market has the following limit orders standing on its book:

Buyer	Bid size (# of shares)	Limit Price (\$)	Offer size (# of shares)	Seller
A	900	9.70		
B	100	9.84		

C	300	9.89		
D	200	10.02		
		10.03	700	X
		10.11	1000	Y
		10.16	300	Z

Dave submits a day order to sell 900 shares, limit \$9.83. What would Dave's average trade price be, assuming that no more buy orders are submitted on that day after Dave's submission?

- A. \$10.09.
- B. \$9.93.
- C. \$9.79.

51. A trader places a limit order to buy shares at a price of \$14.75 with the stock trading at a market bid price of \$14.54 and the bid-ask spread of 0.7%. The order will *most likely* be filled at:

- A. \$14.54.
- B. \$14.64.
- C. \$14.75.

52. The limit orders for a stock on market's book is provided below:

Buyer	Bid Size (# of shares)	Limit Price (\$)	Seller	Offer Size (# of shares)	Limit Price (\$)
1	400	18.30	1	300	20.00
2	300	18.45	2	200	20.15
3	100	18.95	3	200	20.35
4	200	19.50	4	100	20.95
5	300	19.80	5	200	21.10

If a trader submits an immediate-or-cancel limit buy order for 600 shares at a price of \$20.35, the *most likely* average price the trader would pay is:

- A. \$20.00.
- B. \$20.11.
- C. \$20.35.

**LO.i: Define primary and secondary markets and explain how secondary markets support primary markets.**

53. Purchases and sales of an investment that tracks the KSE 100 stock market index during an average trading day are *best* described as:

- A. primary market transactions in a pooled investment.
- B. secondary market transactions in a pooled investment.
- C. secondary market transactions in an actively managed investment.

54. GP Investment bank agrees to help IFT Corp. raise funds on a best effort basis. Who bears the risk when the entire issue is not sold to the public at the stipulated offering price?

- A. GP.

- B. IFT.
  - C. Buyers of the part of the issue that is sold.
55. A German company listed on the Frankfurt Stock Exchange, announced the sale of 7,696,565 shares to a small group of qualified investors at EUR 0.075 per share. The sale can be *best* described as a(an):
- A. Shelf registration sale.
  - B. Private placement sale.
  - C. Initial public offering.
56. A publicly traded company in UK gave its existing shareholders the opportunity to subscribe to new shares in order to raise new capital for business expansion. The existing shareholders could purchase two new shares at a subscription price of GBP 3.59 per share for every 25 shares held. This is an example of a (n):
- A. rights offering.
  - B. private placement.
  - C. initial public offering.
57. An automobile manufacturing company announces that it plans to sell 10 million of its shares to the public. This transaction is *most likely* a sale in the:
- A. futures market.
  - B. primary market.
  - C. secondary market.
58. The cost of raising capital in primary markets:
- A. becomes low when secondary markets are liquid.
  - B. becomes high when secondary markets are liquid.
  - C. is independent of the liquidity of secondary markets.
- LO.j: Describe how securities, contracts, and currencies are traded in quote-driven, order-driven, and brokered markets.**
59. An investor trading in foreign currencies *most likely* trades in a(n):
- A. order-driven market.
  - B. quote driven market.
  - C. brokered market.
60. Which of the following markets is *most* suitable for securities that are unique or illiquid?
- A. Order-driven.
  - B. Quote driven.
  - C. Brokered.
61. Which of the following statements is *least* accurate?
- A. In call markets, trades occur at any time the market is open with prices set either by the auction process or by dealer bid-ask quotes.

- B. Quote-driven markets are sometimes also called dealer markets, price-driven markets, or over-the-counter markets.
- C. In order-driven markets, orders are executed using trading rules, which are necessary because traders are usually anonymous.

**LO.k: Describe characteristics of a well-functioning financial system.**

62. A financial system characterized by liquid markets, low commissions and order price impacts is said to be which of the following?
- A. Allocationally efficient.
  - B. Informationally efficient.
  - C. Operationally efficient.
63. Markets that have high costs of trading in terms of dealer's commissions, bid-ask spreads and order price impacts are *most likely* to be:
- A. Allocationally inefficient.
  - B. Informationally inefficient.
  - C. Operationally inefficient.
64. An economy that best utilizes its resources is *most likely* described as:
- A. Allocationally efficient.
  - B. Informationally efficient.
  - C. Operationally efficient.

**LO.l: Describe objectives of market regulation.**

65. Which of the following is *least* likely an objective of market regulation?
- A. Prevent fraud.
  - B. Control Agency problems.
  - C. Ensure that investors earn at least the risk free rate.

**Solutions**

1. C is correct. A financial system allows entities to trade on information.
2. B is correct. Regulation of arbitrageurs' profits is not a function of the financial system.
3. A is correct. Currencies are classified as financial assets.
4. C is correct. Money market refers to markets for debt securities with maturities of one year or less.
5. A is correct. Once you have entered into a forward contract, it is difficult to exit from it. There is no cash exchange at origination or any periodic payments during the contract term.
6. C is correct. Warrants are least likely to be part of this fund. Warrant holders have the right to buy the issuer's common stock and are classified as equity securities.
7. B is correct. Peter is as an information-motivated trader. Peter's intent is to earn profit from trading on the information that his model provides.
8. B is correct. Robert is best characterized as an investor. Considering the level of his own risk aversion, he is just in investing in low-risk assets. Since he is neither hedging any existing risk nor using information to identify and trade mispriced securities, he is not a hedger or an information-motivated trader.
9. A is correct. Elena is a hedger. The short position on the PKR futures contract offsets the PKR long position in ninety days. She is hedging the risk of the PKR depreciating against the GBP. If the PKR depreciates, she gains on the short future contract. This is how she hedges the risk of foreign currency depreciation.
10. C is correct. Private equity is considered an alternative investment.
11. A is correct. Stocks and 5-10 year bonds are capital market instruments.
12. B is correct. Selling shares publicly is called a sale in the primary market. In such a sale of shares from the issuer to the investor, funds flow to the issuer of the security from the purchaser.
13. A is correct. Warrants are least likely to be part of the fund since they are typically classified as equity and are least likely to be a part of a fixed- income mutual fund. Commercial paper and Treasury bills are short-term fixed-income securities.
14. B is correct. Open-end fund investors sell shares back to the fund based on end of day prices. The fund then sells the underlying investments. For this reason, the shares of open-end funds generally trade close to NAV.

15. A is correct. Once you have entered into a forward contract, it is difficult to exit from the contract. (There is a full reading on forward contracts in derivatives.)
16. A is correct. There is virtually no counter party risk with futures contracts.
17. A is correct. Selling dollars in the forward market locks in a conversion rate and hedges against the risk of the dollar depreciating against the euro.
18. B is correct. The agreement between the textile owner and the cotton supplier to respectively buy and supply cotton in the future at a price agreed upon today is a forward contract.
19. B is correct. Regis will exercise the call options if the price is above the exercise price of \$220 per share. If the stock price is above \$220 but less than \$223, the option would be exercised even though the net result for Regis after considering the premium is a loss. For example, if the stock price is \$221, the option buyer would exercise the option to make  $\$1 = \$221 - \$220$  per share, resulting in a loss of  $\$2 = \$3 - \$1$  after considering the premium. It is better to exercise and have a loss of only \$2, however, rather than not exercise and lose the entire \$3 premium.
20. A is correct. ETFs are securities that represent ownership in the assets held by the fund. The investment companies that create exchange-traded funds (ETFs) are financial intermediaries. The transaction costs of trading shares of ETFs are generally lower than the combined costs of trading the underlying assets of the ETF.
21. B is correct. The process can best be described as arbitrage because it involves buying and selling instruments, whose values are closely related, at different prices in different markets.
22. B is correct. Convertible debt is a fixed income security.
23. B is correct. The service that dealers provide is liquidity. Liquidity is the ability to buy or sell with low transaction costs when you want to trade. By allowing their clients to trade when they want to trade, dealers provide liquidity to them.
24. A is correct. Clearing houses arrange for financial settlement of trades. In futures markets, they guarantee contract performance.
25. B is correct. ATS that do not reveal current client orders are known as dark pools.
26. B is correct. Rafael's exposure to the risk of the stock of the ABC Group is short. He will benefit if the stock price goes down.
27. C is correct. Since Margaret believes that the stock is overvalued, she should place a short-sale order that would be profitable if the stock moves in the direction of the estimated value.
28. B is correct. The repayment of borrowed security or other asset is referred to as covering the short position.

29. A is correct. The steps to calculate the selling price are outlined below:

$$\text{Total purchase value} = \text{Purchase price} * \text{Shares purchased} = \$12 * 300 = \$3,600$$

$$\text{Initial equity} = \frac{\text{Total purchase value}}{\text{Leverage ratio}} = \frac{\$3,600}{2} = \$1,800$$

$$\text{Amount borrowed} = \text{Total purchase value} - \text{Initial equity} = \$3,600 - \$1,800 = \$1,800$$

$$\text{Margin interest paid} = \text{Call money rate} * \text{Amount borrowed} = 5\% * \$1,800 = \$90$$

$$\text{Dividend income} = \text{Dividend per share} * \text{Shares purchased} = \$0.80 * 300 = \$240$$

$$\text{Total return on the initial investment} = 30\% * \$1,800 = \$540$$

$$\text{Gain from price appreciation} = \text{Total return} - \text{Dividend} + \text{Margin interest} = \$540 - \$240 + \$90 = \$390$$

$$\text{Price at which investor sold the stock} = \text{Gain from price appreciation per share} + \text{Purchase price}$$

$$= \left( \frac{\$390}{300} \right) + \$12 = \$13.3$$

30. C is correct. The maximum leverage ratio is  $2.22 = \frac{100}{45}$ .

31. C is correct. The return is 25 percent. If the position had been unleveraged, the return would be  $16.67\% = (70 - 60)/60$ . Because of leverage, the return is  $25\% = 1.5 * 16.67\%$ .

Another way to look at this problem is that the equity contributed by the trader (the minimum margin requirement) is  $66.67\% = 100\%/1.5$ . The trader contributed  $\$40 = 66.67\%$  of  $\$60$  per share. The gain is  $\$10$  per share, resulting in a return of  $25\% = \frac{10}{40}$ .

32. B is correct.

The return is -20.4percent.

$$\text{Total cost of the purchase} = \$13,200 = 600 * \$22$$

$$\text{Equity invested} = \$10,560 = 0.80 * \$13,200$$

$$\text{Amount borrowed} = \$2,640 = \$13,200 - \$10,560$$

$$\text{Interest paid at month end} = \$105.6 = 0.04 * \$2,640$$

$$\text{Dividend received at month end} = \$360 = 600 * \$0.60$$

$$\text{Proceeds on stock sale} = \$10,800 = 600 * \$18$$

$$\text{Total commissions paid} = \$10 = \$5 + \$5$$

$$\text{Net gain/loss} = -\$2,155.6 = -\$13,200 - \$105.6 + \$360 + \$10,800 - \$10$$

$$\text{Initial investment, including commission on purchase} = \$10,565$$

$$\text{Return} = -20.4\% = -\frac{\$2,155.6}{\$10,565}$$

33. A is correct. He will need to contribute  $\text{€}2,250 = 45\%$  of  $\text{€}5,000$  as the initial margin.

34. B is correct. A margin call will first occur at a price of  $\$25$ . Because you have contributed half and borrowed the remaining half, your initial equity is 50 percent of the initial stock price, or  $\$15 = 0.50 * \$30$ . If P is the subsequent price, your equity would change by an amount equal to the change in price. So, your equity at price P would be  $15 + (P - 30)$ . A

margin call will occur when the percentage margin drops to 40 percent. So, the price at which a margin call is calculated as follows:

$$(\text{Equity/Share})(\text{price / share}) = \frac{15 + P - 30}{P} = 40\%$$

The solution is  $P = \$25.00$

35. B is correct.

$$\text{Initial equity (\%)} \text{ in the margin transaction} = \frac{1}{\text{Leverage ratio}} = \frac{1}{1.5} = 0.67$$

$$\text{Initial equity per share at the time of purchase} = \$25 * 0.67 = \$16.75;$$

Price at which margin call occurs:

$$\frac{\text{Equity per share}}{\text{Price per share}} = \text{Maintenance margin \%}$$

$$= \frac{\$16.75 + P - \$25}{P} = 0.30;$$

$$0.7P = \$8.25;$$

$$P = \$11.79.$$

36. C is correct.

Initial investment	$\left[ (\$15 * 200) * \left( \frac{1}{3} \right) \right] + (\$0.05 * 200)$	\$1010
Proceeds on sale	$20 * 200$	4000
+ Dividends received	$\$0.50 * 200$	100
Less payoff on loan	$(\$15 * 200) * \left( \frac{2}{3} \right)$	- 2000
Less margin interest paid	$(0.025 * 2000)$	-50
Less commission paid	$\$0.05 * 200$	- 10
Remaining equity	\$2040	
Return on investment	$\frac{\$2040 - \$1010}{\$1010}$	102%

37. C is correct.

$$\text{Initial investment} = (120 * 1000 * 0.35) + (0.2 * 1000) = 42,200$$

$$\text{Proceeds on sale} = 140 * 1000 = 140,000$$

$$\text{Less payoff loan} = 120 * 1000 * (1 - 0.35) = 78,000$$

$$\text{Less margin interest paid} = 0.08 * 78,000 = 6,240$$

$$\text{Plus dividends received} = 1.45 * 1000 = 1,450$$

$$\text{Less sales commission paid} = 0.2 * 1000 = 200$$

$$\text{Remaining equity} = 57,010$$

$$\text{Therefore, return on investment} = \frac{57,010 - 42,200}{42,200} = 35\%$$

38. C is correct.

The stock price is 48 and the leverage ratio is 2. This means that  $\frac{48}{\text{Equity}} = 2$ . So equity (amount actually contributed by investor) is 24. Hence, the initial margin is  $\frac{24}{48} = 0.5$ .

$$\text{Margin call price} = \text{Initial price} * \frac{1 - \text{Initial Margin}}{1 - \text{Maintenance Margin}}$$

$$34.29 = 48 \frac{1 - 0.5}{1 - \text{MM}}$$



Solving for MM, we get  $MM = 0.30$ .

39. B is correct. Fill-or-kill orders are also known as immediate-or-cancel orders. They are cancelled unless filled (in part or in whole) immediately.
40. B is correct. The maximum possible loss is \$1,950. If the stock price crosses \$60, the stop buy order will become valid and will get executed at a maximum limit price of \$65. The maximum loss per share is  $\$13 = \$65 - \$52$ , or \$1,950 for 150 shares.
41. B is correct. The most appropriate order is a good-till-cancelled stop sell order. This order will be acted on if the stock price declines below a specified price (in this case, \$17.50).
42. B is correct. A validity instruction tells when to fill an order.
43. C is correct. Stop buy orders can limit losses on a short position.
44. A is correct. A market order instructs the broker or exchange to obtain the best possible price immediately available.
45. C is correct. The market is 3.94 bid, offered at 5.02, which is the best bid and best offer.
46. A is correct. This order is said to take the market because an order is already in place where a trader is willing to buy for 23.35.
47. C is correct. This order is said to make a new market. The new buy order is better than the existing best buy offer of \$154.62.
48. A is correct. Order I (time of arrival of 7:12:01) has precedence. In the order precedence hierarchy, the first rule is price priority. Based on this rule, sell orders I, II and III get precedence over order IV. The next rule is display precedence at a given price. Because order II is a hidden order, orders I and III get precedence. Finally, order I gets precedence over order III based on time priority at same price and same display status.
49. C is correct. The order for 600 shares would get cancelled; there would be no fill. Lao is willing to buy at CNY 84.75 or less, but the minimum offer price of the book is CNY 84.80, therefore, no part of the order would be filled. Because Lao's order is immediate-or-cancel, it would be cancelled.
50. B is correct. Dave's average trade price is:
- $$\$9.92 = \frac{200 * \$10.02 + 300 * \$9.89 + 100 * \$9.84}{200 + 300 + 100}$$
- Dave's sell order first fills with the most aggressively priced buy order, which is D's order for 200 shares at \$10.02. Dave still has 800 shares for sale. The next most aggressively priced buy order is C's order for 300 shares at \$9.89. This order is filled. Dave still has 500 shares for sale. The next most aggressively priced buy order is B's order for 100 shares at \$9.84. A third trade takes place. Dave still has 400 shares for sale. The next buy order is A's

order for 900 shares at \$9.70. However, this price is below Dave's limit price of \$9.83. Therefore, no more trade is possible.

51. B is correct. An order is filled at the best available price as long as this price is lower than the limit price. In this case, the best available price is the market ask price =  $\$14.54 * (1 + 0.7\%) = \$14.64$ . Since this price is lower than the limit price of \$14.75, the order will be filled at this price.
52. B is correct. The limit buy order will be filled first with the most aggressively priced limit sell order and will be followed by filling with the higher priced limit sell orders that are needed up to and including the limit buy price until the order is filled.  
Average price =  $\frac{[(300 * \$20.00) + (200 * \$20.15) + (100 * \$20.35)]}{600} = \$20.11$
53. B is correct. Such investments trade in the secondary market and are a pooled investment vehicle.
54. B is correct. Since this a best-effort arrangement, the issuer (IFT) bears the risk that the issue may be undersubscribed.
55. B is correct. This sale is a private placement. As the company is already registered, the share sale is not an initial public offering. The sale cannot be called as shelf registration because the company is not selling shares to the public in fragments.
56. A is correct. This offering is a rights offering as the company is distributing rights to existing shareholders to buy stock at a fixed price in proportion to their current holdings.
57. B is correct. This transaction is most likely to be a part of primary market. This is a direct sale of issuer to investor and fund flows to the issuer directly from the purchaser of the security.
58. A is correct. The cost of raising capital becomes low in primary markets when securities trade in liquid secondary markets.
59. B is correct. Almost all currency trading takes place in quote driven markets where trading is done through dealers at the prices quoted by them. They are also called as over-the-counter markets.
60. C is correct. Brokered markets are most suitable for securities that are unique or illiquid.
61. A is correct. In call markets, orders are accumulated and securities trade only at specific times.
62. C is correct. Operationally efficient markets are liquid markets in which the costs of trading commissions, bid-ask spreads, and order price impacts are low.

63. C is correct. Cost of trading determines the operational efficiency of a financial market. If a market has high cost of trading, it is operationally inefficient. If filling orders is very costly, informed trading may not be possible.
64. A is correct. Economies that use resources in such a way that they are most valuable are allocationally efficient.
65. C is correct. Ensuring that investors earn at least the risk free rate is least likely to be an objective of market regulation.