

2010 Level 1 Sample Exam Volume 1

Answer

1. Correct answer A

CFA Institute Standards of Professional Conduct

2010 Modular Level I, vol.1, pp. 29, 35

Study Session 1-2-b

Explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each standard.

A is correct as a personal bankruptcy does not necessarily constitute a violation of Standard 1(D). If the circumstances of the bankruptcy involved fraudulent or deceitful business conduct, then failing to disclose it may constitute a violation of the Standards.

2. Correct answer: B

CFA Institute Standards of Professional Conduct

2010 Modular Level 1, vol. 1, pp. 29-30

Study Session 1-2-b

Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards

B is correct because Barrett's client base is made up of a small number of large institutions, so stating in the advertisement that his customer base is a larger number is a misrepresentation and a violation of Standard I (C). In addition, since the advertisement focuses only on the benefits and does not mention the potential risks of these investments, it is also potentially misleading to clients.

3. Correct answer: B

CFA Institute Standards of Professional Conduct

2010 Modular level I, Vol. 1, pp. 36-37, 45, 67

Study Session 1-2-b

Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

B is correct as Miffitt has not violated the confidentiality standard. Even though she did not initiate the market manipulation, Miffitt added to the stock's price movement when she sold into a declining market. By repurchasing the shares for her clients she is seeking to take advantage of the manipulation and is in violation of standard II (B). Miffitt has attempted to benefit her clients by trading on information that could affect the value of the micro cap stock and as such would be classified as material nonpublic information. Information that is known regarding orders for large trades before they are executed is considered material nonpublic information.

4. Correct answer: A

Diana Fairbanks doesn't need to take any action about the information he got.

5. Correct answer: B

CFA Institute Standards of Professional Conduct

2010 Modular Level I. vol. 1, pp.60-61

Study Session 1-2-b

Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

B is correct as Buckner is in violation of Standard III(C), since she did not consider issues such as the limited liquidity or any potential leverage of this new product when she invested a substantial percentage of her client's portfolios in these instruments.

6. Correct answer: C

CFA Institute Standards of Professional Conduct

2010 Modular Level I, Vol.1, pp. 67-69

Study Session 1-2-b

Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

C is correct. In order to avoid violating Standard III (E), Staal should determine if applicable securities regulations require disclosing the records before she provides the confidential information concerning her client's investments.

7. Correct answer C

CFA Institute Standards of Professional Conduct

2010 Modular Level I. Vol. 1, pp. 67, 71 84

Study Session 1-2-b

Distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

C is correct because this Standard has not been violated. Even though he talked to the client, the communication did not relate to the investment process.

8. Correct answer A

A is correct because the client approved the purchase of only one below-investment-grade while the portfolio manager has purchased several additional bonds below investment grade without client approval in violation of Standards III (c).

9. Correct answer C

CFA Institute Standards of Professional Conduct

2010 Modular Level I. vol. 1, pp.64-65

Study session 1-2-c

Recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.

C is correct because in order to meet their obligations under Standard III (D), members should present the performance of the weighted composite of similar Portfolios rather than using a single representative or using all accounts, so this is the best selection of the options provided.

10. Correct answer: C

"Common Probability Distributions," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2010 Modular Level I, vol. 1, pp. 433-435

Study Session 3-9-f, g

Calculate and interpret probabilities, given the discrete uniform and the binomial distribution functions.

Construct a binomial tree to describe stock price movement.

Across two periods, there are four possibilities: an up move followed by an up move (\$121.00 end value), an up move followed by a down move (\$101.20 end value), a down move followed by an up move (\$101.20 end value), and a down move followed by a down move (\$84.64 end value). The probability of an up move followed by a down move is $0.40 \times 0.60 = 0.24$.

The probability of a down move followed by an up move is $0.60 \times 0.40 = 0.24$ also. Both of these sequences result in an end value of \$101.20. Therefore, the probability of an end value of \$101.20 is 48%.

11. Correct answer A

"Hypothesis Testing," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA and David E. Runkle, CFA

2010 Modular Level I, vol. 1, pp. 538-542

Study Session 3-11-h

Identify the appropriate test statistic and interpret the results for a hypothesis test concerning the mean difference of two normally distributed populations (paired comparisons test).

12. Correct answer A

"Statistical Concepts and Market Returns," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2010 Modular Level I, vol. 1, pp. 284-285

Study Session 2-7-e

Define, calculate, and interpret measures of central tendency, including the population mean, sample mean, arithmetic mean, weighted average or mean (including a portfolio return viewed as a weighted mean), geometric mean, harmonic mean, median, and mode.

The sum of the ten numbers is 140. Dividing by 10 gives the mean of 14.

13. Correct answer B

"Sampling and Estimation," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2010 Modular level I, vol. 1, p, 423

Study Session 3-10-e

Calculate and interpret the standard error of the sample mean.

The standard error of the sample mean, when we know the sample standard deviation, is:

$$S_x = \frac{s}{\sqrt{n}}. \text{ In this case, } S_x = \frac{15}{\sqrt{25}} = 3.00$$

14. Correct answer C

Sampling and Estimation: Richard A. Defusco, CFA, Dennis w. McLeavey. CFA, Jerald E. Pinto, CFA, and David E. Runkle, CF.A

2010 Modular level I, vol. 1, pp. 482-485

Study Session 3-10-d

Interpret the central limit theorem and describe its importance.

The central Limit Theorem: "Given a population described by any probability distribution having a mean and finite variance σ^2 , the sampling distribution of the sample mean computed from samples of size n from this population will be approximately normal with mean μ (the population mean) and variance σ^2/n (the population variance divided by n) when the sample size n is large" (p. 482)

15. Correct answer A

"Discounted Cash Flow Applications," Richard A. Defusco, CFA, Dennis w. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2010 Modular Level 1, vol.1, pp. 253-254

Study Session 2-6-d

Calculate and interpret the bank discount yield, holding period yield, effective annual yield, and money market yield for a U.S. Treasury bill.

Solve for bank discount yield using

16. Correct answer A

"Technical Analysis," Frank K. Reilly, CFA, and Keith C. Brown CFA

2010 Modular level I, vol. 1, pp, 581-586

Study Session 3-12-c

List and describe examples of each major category of technical trading rules and indicators.

Momentum indicators include "breadth of market" and 'stocks above their 200-day moving average." (pp. 581-582)

17. Correct answer A

"Elasticity, Michael Parkin

2010 Modular Level 1, vol.2, pp. 11-12

Study Session 4-13-b

Calculate elasticity on a straight-line demand curve; differentiate among elastic, inelastic, and unit elastic demand; and describe the relation between price elasticity of demand and total revenue.

If demand is elastic, a 1% price cut increases the quantity sold by more than 1% and total revenue increases.

18. Correct answer B

Output and Costs, Michael Parkin

2010 Modular level I, Vol. 2, p. 146

Study Session 4-17-d

Explain the company's production function, its properties of diminishing returns and diminishing marginal product of capital the relation between short-run and long-run costs, and how economies and diseconomies of scale affect long-run costs

In the short run, a company can vary the quantity of labor but the quantity of capital is fixed. In the long run, a firm can vary both the quantity of labor and the quantity of capital.

19. Correct answer A

"Monopolistic Competition and Oligopoly," Michael Parkin

2010 Modular level 1, Vol.2, pp. 246-247

Study Session 5-20-e

Describe oligopoly games including the Prisoners' Dilemma.

The Nash equilibrium of the Prisoners Dilemma game is that both firms cheat.

20. Correct answer B

Money, the Price Level, and Inflation,' Michael Parkin

2010 Modular Level I, vol. 2, p. 371

Study Session 6-24-d

Explain the goals of the U.S. Federal Reserve (Fed) in conducting monetary policy and how the Fed uses its policy tools to control the quantity of money, and describe the assets and liabilities on the Fed's balance sheet.

The Fed uses three main policy tools to achieve its objectives: required reserve ratios, discount rate, and open market operations.

21. Correct answer B

U.S. Inflation, Unemployment, and Business Cycles, Michael Parkin

2010 Modular Level I, vol. 2, P. 399

Study Session 6-25-b

Describe and distinguish among the factors resulting in demand-pull and cost-push inflation and describe the evolution of demand-pull and cost-push inflationary processes.

"Demand-pull inflation can be kicked off by.... an increase in government spending, a tax cut,..." (p. 399)

22. Correct answer A

"Monitoring Jobs and the Price Level," Michael Parkin

2010 Modular level I. Vol.2, pp. 312-313

Study Session 5-22-c

Explain the types of unemployment, full employment, the natural rate of unemployment, and the relation between unemployment and real GDP.

The fluctuating unemployment over the business cycle is called cyclical unemployment.

23. Correct answer B

"Financial Statement Analysis: An Introduction," Thomas R. Robinson CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A Broihahn, CFA

2010 Modular Level I. Vol. 3, p. 25

Stud, Session 7-29-f

Describe the steps in the financial statement analysis framework

Preparing common-size financial statements is part of the Process data step.

24. Correct answer C

"Financial Reporting Mechanics, Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, Karen O'Connor Rubsam, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular Level I vol. 3, pp. 64-66

Study Session 7-30-d

Explain the need for accruals and other adjustments in preparing financial statements.

The statement about accrued expenses is correct accrued revenue arises when revenue has been earned but not yet received; a valuation adjustment for an asset converts its historical cost to current market value.

25. Correct answer A

"Financial Reporting Standards, Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, Karen O'Connor Rubsam, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA 2010 Modular level I, vol. 3, pp. 106-108

Study Session 7-31-d

Describe the International Financial Reporting Standards (IFRS) framework, including the qualitative characteristics of financial statements, the required reporting elements, and the constraints and assumptions in preparing financial statements.

The four principal qualitative characteristics that make financial information useful are understandability, relevance, reliability, and comparability. Materiality relates to the level of detail of the information needed to achieve relevance — whether the omission or misstatement of the information would impact the decision-maker's decision.

26. Correct answer A

"Understanding the Income Statement, Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular level 1. vol.3, pp. 147-149

Study Session 8-32-b

Explain the general principles of revenue recognition and accrual accounting demonstrate specific revenue recognition applications (including accounting for long-term contracts, installment sales, barter transactions, and gross and net reporting of revenue); and discuss the implications of revenue recognition principles for financial analysis.

Percent Completed	Costs Incurred/Total Costs Anticipated X 100	
Gross Profit	%Complete X Future Anticipated Profit-Profit Already recognized	
	Year1	Year2
Percent Complete	$3,117,500/7,250,000=43.0\%$	$5,700,000/7,600,000=75.0\%$
Gross Profit	$43.0\% \times (10,000,000 - 7,250,000) = 1,182,500$	$75.0\% \times (10,000,000 - 7,600,000) - 1,182,500 = 617,500$

27. Correct answer A

"Understanding the Income Statement, Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular level 1. Vol.3, pp. 160-165

Study Session 8-32-c, d

Discuss the general principles of expense recognition, such as the matching principle, specific expense recognition applications (including depreciation of long-term assets and inventory methods), and the implications of expense recognition principles for financial analysis.

Demonstrate the appropriate method of depreciating long-term assets, accounting for inventory, or amortizing intangibles, based on facts that might influence the decision.

Under double declining balance method, the depreciation rate would be 2 x the straight-line rate of 33.3%; i.e., 66.6% or two-thirds depreciation rate per year. However, the asset should not be depreciated below its assumed residual value in any year.

Double Declining Method of Depredation

Year	Net BV at start of Year	Depredation	Net BV at End of Year
1	50,000	33,333	16,667
2	16,667	11,111	5,555

3	5,555	555	5,000
*Alternative calculation for start of Year 3 Net Book Value: $50,000 \times (1 - 0.667) \times (1 - 0.667) = 5,555$			
**Depreciation cannot be $0.667 \times 5,555 = 3,705$, since that would reduce book value to below the estimated 5,000.			

28. Correct answer A

"Understanding the Income Statement, Thomas R. Robinson, CFA Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular Level I, vol. 3, pp. 170-178

Study Session 8-32-g, h

Describe the components of earnings per share and calculate a company's earnings per share (both basic and diluted earnings per share) for both a simple and a complex capital structure,

Differentiate between dilutive and anti-dilutive securities, and discuss the implications of each for the earnings per share calculation.

The fully diluted EPS is closest to \$2.91 per share.

	Basic EPS	Fully Diluted EPS	
Net Income	1,000,000	1,000,000	
Preferred Div, Series A	(48,000)	(48,000)	12,000 share \times \$4 per share
Preferred Div, Series B	<u>(225,000)</u>	<u>0</u>	30,000 shares \times \$7.50 per share Using If-Converted Method
Earnings available to common shareholders	727,000	952,000	
Weighted Average Number of Common Shares (WACS)			
Share o/s	250,000	250,000	
If converted		<u>75,000</u>	2.5 common / pf \times 30,000 pf
WACS	250,000	325,000	
EPS= <u>Earnings available</u> / WACS	2.91	2.93*	
* Exceeds Basic EPS; Series B is antidilutive and is therefore not included.			

29. Correct answer: B

Inventories, Elbie Antonites, CFA, and Michael A. Broihahn, CFA

2010 Modular Level I, vol. 3, Pp, 379-380

Study Session 9-36-a

Explain IFRS and US GAAP rules for determining inventory cost, including which costs are capitalized and methods of allocating costs between cost of goods sold and inventory. The total capitalized costs include fixed production costs, the direct conversion costs of material and labor, storage costs required as part of production but not abnormal waste costs.

$$\$500,000 + 300,000 + 25,000 = \$825,000$$

30. Correct answer C

"Long-Lived Assets," R. Elaine Henry, CFA, and Elizabeth A. Gordon

2010 Modular Level I, Vol. 3, pp. 427-428

Study Session 9-37-a, c

Explain the accounting standards related to the capitalization of expenditures as part of long-lived assets, including interest

Explain the circumstances in which software development costs and research and development costs are capitalized

Under IFRS research and development costs are expensed until certain criteria are met, including that technical feasibility has been established and the company intends to use it.

31. Correct answer A

"Income Taxes," Elbie Antonites, CFA, and Michael A. Broihahn, CFA

200 Modular Level I, vol. 3, pp. 479-480

Study Session 9-38-c, f

Determine the tax base of a company's assets and liabilities.

Distinguish between temporary and permanent items in pre-tax financial income and taxable income.

The tax base is the amount that will be deductible for tax purposes in future periods; i.e., net book value of the asset for tax purposes: $500,000 - 0.15(500,000) = \$425,000$. The temporary difference is the difference between the net book value of the asset for accounting purposes ($500,000 - 500,000/10 = \$450,000$) and the net book value for taxes: $450,000 - 425,000 = \$25,000$.

32. Correct answer B

"Financial statement Analysis Techniques," Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular Level I, vol. 3, pp. 333, 337

Long-Term Liabilities and Leases,' Elizabeth A. Gordon and R. Elaine Henry, CFA

2010 Modular Level I, vol. 3, pp. 555-557

Study Sessions 8-35-d; 9-39-i

Calculate, classify, and interpret activity, liquidity, solvency, profitability, and valuation ratios.

Describe the types and economic consequences of off-balance sheet financing and determine how take-or-pay contracts, throughput arrangements, and the sale of receivables affect financial statements and selected financial ratios.

The total sum of the payments should be added to both liabilities and assets.

$$\begin{aligned}\text{The revised debt-to-equity} &= \frac{[150 + 20(0.750)]}{100} = 1.65 \\ \text{The revised ROA} &= \frac{25}{250 + 20(0.750)} = 9.4\%\end{aligned}$$

33. Correct answer C

Financial Reporting Quality: Red Flags and Accounting Warning Signs, Thomas R. Robinson, CFA, and Paul Murter

2010 Modular level I. vol. 3, pp. 578-579

Study Session 10-40-e

Describe common accounting warning signs and method for detecting each.

A ratio of operating cash flow to net income below 1.0 (not above 1.0) can be a warning sign of low-quality earnings

34. Correct answer A

"Financial Statement Analysis: Applications," Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA

2010 Modular level I. Vol. 3, pp. 621-623

"Company Analysis and Stock valuation," Frank K. Reilly, CFA, and Keith C. Brown, CFA
2010 Modular Level 1, Vol.5, pp. 176-178

Study Sessions 10-42-d; 14-58-a

Discuss the use of financial statement analysis in screening for potential equity investments.

Differentiate between (1) a growth company and a growth stock, (2) a defensive company and a defensive stock. (3) a cyclical company and a cyclical stock (4) a speculative company, and a speculative stock, and (5) a value stock and a growth stock.

Metrics such as low P/E and low price-book are aimed at selecting value companies; therefore, the portfolio is most appropriate for value investors.

35. Correct answer: C

Capital Budgeting. John D. Stowe, CFA, and Jacques R. Gagne, CFA

2010 Modular Level I, Vol. 4, pp. 10-11, 17-19, 23

Study Session 11-44-d, e

Calculate and interpret the results using each of the following methods to evaluate a single capital project net present value (NPV), internal rate of return (IRR), payback period, discounted payback period, and profitability index (P10)

Explain the NPV profile, compare and contrast the NPV and IRR method when evaluating independent and mutually exclusive projects, and describe the problems associated with each of the evaluation methods.

The NPV at 15% is \$99.93. The NPV at 10% is -\$0.01. The NPV at 8% is -\$307.39.

36. Correct answer B

"Cost of Capital," Yves Courtois, CFA, Gene C. Lai, and Pamela P. Peterson, CFA
2010 Modular level I, Vol.4, pp. 41, 45-46

Study Session 11-45-d

Explain how the marginal cost of capital and the investment opportunity, schedule are used to determine the optimal capital budget.

When marginal cost of capital (MCC) > investment opportunity schedule (IOS) return, then the capital budget is above the optimal capital budget (see Fig. 1, P. 46).

37. Correct answer A

Cost of Capital, Yves Courtois, CFA, Gene C. Lai, and Pamela P. Peterson, CFA
2010 Modular Level I, vol. 4, pp. 40-42

Study Session 11-45-b

Describe how taxes affect the cost of capital from different capital sources.

Bonds are a form of debt that must be adjusted for taxes when considering the contribution to the weighted average cost of capital.

38. Correct answer C

"Financial Analysis Techniques, Thomas R. Robinson, CFA, Jan Hendrik .wan Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Brohian, CFA
2010 Modular Level I, vol. 3, p. 329

"Working Capital Management," Edgar A. Norton, Jr., CFA, Kenneth 1. Parkinson, and Pamela P. Peterson, CFA

2010 Modular Level I, vol. 4, pp. 95-101

Study Sessions 8-35-d; 11-46-c

Calculate, classify, and interpret activity, liquidity, solvency, profitability, and valuation ratios.

Evaluate the overall working capital effectiveness of a company, using the operating and cash conversion cycles, and compare its effectiveness with other peer companies.

Payables are not part of the operating cycle calculation.

39. Correct answer C

"The Corporate Governance of Listed Companies: A Manual for Investors"

2010 Modular level I, vol. 4, p. 175

Study Session 11-48-b, c

Discuss and critique characteristics and practices related to board and committee independence, experience, compensation, external consultants, and frequency of elections, and determine whether they are supportive of shareholder protection.

Describe board independence and explain the importance of independent board members in corporate governance.

The CEO and board chair should be separated to prevent too much executive power.

40. Correct answer A

"Organization and Functioning of Securities Markets, Frank K. Reilly, CFA, and Keith C. Brown, CFA

2010 Modular Level I, vol. 5, pp. 10-11

Study Session 13-52-b

Distinguish between primary and secondary capital markets and explain how secondary markets support primary markets.

An investment banker agreeing to sell an issue on a best-efforts basis does not buy the issue from the company. The stock is owned by the company and the investment banker acts as a broker to sell whatever it can at a stipulated price.

41. Correct answer. A

"Efficient Capital Markets," Frank K. Reilly, CFA, and Keith C. Brown, CFA

2010 Modular Level 1, Vol. 5, pp. 71-72, 75-76, 86

Study Session 13-54-b

Describe the tests used to examine each of the three forms of the EMH, identify various market anomalies and explain their implications for the EMH, and explain the overall conclusions about each form of the EMH.

Tests of trading rules, for example: alternative technical trading rules are for testing the weak-form hypothesis whereas studies examining the January anomaly of buying stocks in December and selling them in early January relate to semi strong-form of market efficiency.

42. Correct answer A

"Efficient Capital Markets," Frank K. Reilly, CFA and Keith C. Brown, CFA

2010 Modular level I, Vol.5, pp. 94-95

Study Session 13-54-c

Explain the implications of stock market efficiency for technical analysis, fundamental analysis, the portfolio management process, the role of the portfolio manager, and the rationale for investing in index funds.

Portfolio management in efficient markets but without superior analysts, among other things, involves complete diversification on a global basis so the portfolio moves consistency with the world market. In this context, proper diversification means eliminating all unsystematic (unique) variability.

43. Correct answer C

'An Introduction to Security valuation," Frank K. Reilly, CFA, and Keith C. Brown, CFA

2010 Modular level I. vol. 5, pp, 138-139, 146-147

Study Session 14-56-g

Describe a process for developing estimated inputs to be used in the dividend discount model (DDM), including the required rate of return and expected growth rate of dividends. When deriving the value of the total firm, we discount the operating free cash flow prior to the payment of interest to the debtholders but after deducting funds needed to maintain the firm's asset base (capital expenditures). Therefore, the firm's weighted average cost of capital is the most appropriate discount rate.

44. Correct answer C

"An Introduction to Security valuation" Frank K. Reilly, CFA, and Keith C. Brown, CFA
2010 Modular Level I, vol. 5, pp. 158-159

Study Session 14-56-f, g

Estimate the dividend growth rate, given the components of the required rate of return incorporating the earnings retention rate and current stock price.

Describe a process for developing estimated inputs to be used in the dividend discount model (DDM), including the required rate of return and expected growth rate of dividends.

ROE = Return on assets x Financial leverage = $10 \times 1.5 = 15\%$

Retention ratio = $(1 - \text{Payout ratio}) = (1 - 0.4) = 0.6$

Growth rate = Retention ratio x Return on equity = $0.6 \times 15 = 9\%$

45. Correct answer B

"An Introduction to Security valuation," Frank K. Reilly, CFA, and Keith C. Brown, CFA
2010 Modular Level I, vol. 5, pp. 144-145

Study Session 14-56-c

Calculate and interpret the value of both a preferred stock and a common stock using the dividend discount model (DDM).

$$V = 2.40(1.20)/1.15 + 2.40(1.20)^2/1.15^2 + [2.40(1.20)^2(1.04)/(0.15 - 0.04)]/1.15^2$$
$$= \$2.50 + \$2.61 + \$24.71 = \$29.82$$

46. Correct answer: A

"Forward Markets and Contracts," Don M. Chance
2010 Modular Level I, Vol. 6, p. 32

Study Session 17-68-a

Explain delivery/settlement and default risk for both long and short positions in a forward contract.

A is correct because the long is due to receive from the short a stock that is worth \$105.00, for which the payment to the short of \$103.00 is required. In a cash-settled forward contract the short simply pays the long \$2.00.

47. Correct answer: A

"Option Markets and Contracts," Don M. Chance,

2010 Modular Level I, Vol. 6, p. 94

Study Session 17-70-e

Define interest rate caps, floors, and collars.

A is correct because a combination of interest rate calls is referred to as an interest rate cap or sometimes just a cap.

48. Correct answer: C

"Option Markets and Contracts," Don M. Chance

2010 Modular Level I, Vol. 6, p. 105

Study Session 17-70-h

Determine the minimum and maximum values of European options and American options.

C is correct because the lower bound on a European call price is either zero or the underlying price minus the present value of the exercise price, whichever is greater.

$$C_0 \geq \text{Max} [0, S_0 - X / (1 + r)^T]$$
$$\text{Max} [0, 29 - 25 / (1.05)^{0.25}] = 4.30$$

49. Correct answer: A

"Alternative Investments," Bruno Solnik and Dennis McLeavey

2010 Modular Level I, Vol. 6, pp. 205-207

Study Session 18-73-f

Calculate the net operating income (NOI) from a real estate investment, the value of a property using the sales comparison and income approaches, and the after-tax cash flows, net present value, and yield of a real estate investment.

A is correct because to arrive at the estimated value of the property, subtract operating expenses from gross income (300,000 - (4% x 300,000 or 12,000) - 27,000 - 14,000 - 21,000 = 226,000). Then divide the net operating income by the cap rate, which is derived from the recent transaction (226,000 / (75,000/937,500) = 226,000 / 0.08 = 2,825,000). Note that neither depreciation nor financing costs are deducted as operating expenses.

50. Correct answer: B

Alternative Investments," Bruno Solnik and Dennis McLeavey

2010 Modular Level I, Vol. 6, pp. 216-218

Study Session 18-73-h

Calculate the net present value (NPV) of a venture capital project, given the project's possible payoff and conditional failure probabilities.

B is correct because you calculate the probability of success as (1-0.30) x (1 - 0.25) x (1-0.20) x (1-0.20) x (1-0.20) = 0.2688. Then calculate the NPV from success:

$$10000/1.18^5 - 1000 = 3372 \times 0.2688 = 906$$

Subtracting the NPV of failure, -1,000 x (1 - 0.2688 or 0.7312) = -731. The difference between the NPVs is the expected NPV of the project, 906 - 731 = 175.

51. Correct answer: C

"Alternative Investments," Bruno Solnik and Dennis McLeavey,
2010 Modular Level I, Vol. 6, pp. 195-197,
Study Session 18-73-c

Explain the advantages and risks of ETFs.

C is correct because the capital gain distribution is lower for ETFs than for mutual funds as sales of the underlying securities are not necessary to accommodate inflows/outflows as securities are transferred in kind between investors.

52. Correct answer: A

"Features of Debt Securities," Frank J. Fabozzi, CFA
2010 Modular Level I, Vol. 5, p. 238
Study Session 15-60-b

Describe the basic features of a bond, the various coupon rate structures, and the structure of floating-rate securities.

A is correct because a step-up note has contractually mandated changes in its coupon rate.

53. Correct answer: C

"Features of Debt Securities," Frank J. Fabozzi, CFA
2010 Modular Level I, Vol. 5, p. 240
Study Session 15-60-b

Describe the basic features of a bond, the various coupon rate structures, and the structure of floating-rate securities.

C is correct because $\text{LIBOR} + 300 \text{ bps}$ at the reset date equals $1.5\% + 3.00\% = 4.5\%$, which is below the floor of 5.00%.

54. Correct answer: B

"Features of Debt Securities," Frank J. Fabozzi, CFA
2010 Modular Level I, Vol. 5, p. 247
Study Session 15-60-e

Identify the common options embedded in a bond issue, explain the importance of embedded options, and state whether such options benefit the issuer or the bondholder.

B is correct because the floor protects the bondholder if rates fall very low.

55. Correct answer: B

"Risks Associated With Investing in Bonds," Frank J. Fabozzi, CFA
2010 Modular Level I, Vol. 5, pp. 265-266
Study Session 15-61-b

Identify the relations among a bond's coupon rate, the yield required by the market, and the bond's price relative to par value (i.e., discount, premium, or equal to par).

B is correct because when the required yield is higher than the coupon rate, the bond trades at a discount to par.

56. Correct answer: A

"Risks Associated With Investing in Bonds," Frank J. Fabozzi, CFA

2010 Modular Level I, Vol. 5, p. 267

Study Session 15-61-d

Identify the relationship among the price of a callable bond, the price of an option-free bond, and the price of the embedded call option.

A is correct because when interest rates fall, the bond is more likely to be called, limiting the upside potential.

57. Correct answer: B

"Risks Associated With Investing in Bonds," Frank J. Fabozzi, CFA

2010 Modular Level I, Vol. 5, pp. 269-271

Study Session 15-61-f

Compute and interpret the duration and dollar duration of a bond.

B is correct because the duration equals

$$\frac{\text{price if yields decline} - \text{price if yields rise}}{2 \times \text{initial price} \times \text{change in yield}} = \frac{100.1 - 96.6}{2 \times 98.2 \times 0.003} = 5.94$$

58. Correct answer: C

"Investment Analysis and Portfolio Management, Eighth Edition," Frank Reilly and Keith C. Brown

2010 Modular Level I, Vol. 4, pp. 218-222

Study Session 12-49-c

Describe the return objectives of capital preservation, capital appreciation, current income, and total return.

C is correct because when an investor wants the portfolio to grow in real terms over time to meet future needs, it will occur through capital gains. The portfolio presented in the table above is heavily invested in equity, with 70% allocated to equity. This portfolio is more likely to provide capital gains over time.

59. Correct answer: C

"Investment Analysis and Portfolio Management, Eighth Edition," Frank Reilly and Keith C. Brown

2010 Modular Level I, Vol. 4, p. 223

Study Session 12-49-d

Describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique needs and preferences.

C is correct because investors with long investment horizons generally require less liquidity and can tolerate greater portfolio risk: less liquidity because the funds are not usually needed for many years; greater risk tolerance because any shortfall or losses can be overcome by returns earned in subsequent years.

60. Correct answer: B

"Investment Analysis and Portfolio Management, Eighth Edition," Frank Reilly and Keith C. Brown

2010 Modular Level I, Vol. 4, pp. 248-249

Study Session 12-50-d

Compute and interpret the covariance of rates of return and show how it is related to the correlation coefficient.

B is correct because $\text{Cov}_{ij} = \sigma_i \sigma_j \Gamma_{ij} = 0.0625^{0.5} \times 0.090^{0.5} \times 0.450 = 0.0338$