

2011 Level 1 Sample Exam Volume 2

Answer

1. Correct answer: C

2011 Modular Level I, Vol.1, p. 8

Study Session 1-1-a

Describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards.

The two principles of the Rules of Procedure for Professional Conduct are confidentiality of proceedings and fair process to the member and candidate.

2. Correct answer: B

2011 Modular Level I, Vol.1, p. 173

Study Session 1-3-b

Explain the construction and purpose of composites in performance reporting.

A composite must include all actual, fee-paying, discretionary portfolios managed in accordance with the same investment mandate, objective, or strategy. By including both value and growth accounts, the composite is made up of portfolios with different investment mandates or strategies.

3. Correct answer: A

2011 Modular Level I, Vol.1, pp. 123-125

Study Session 1-2-c

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

Making full and fair disclosure of all matters that could reasonably be expected to impair their independence and objectivity or interfere with respective duties to their clients is required by Standard VI, Conflicts of Interest, of the CFA Code of Ethics and Standard of Professional Conduct.

4. Correct answer: B

2011 Modular Level I, Vol.1, pp. 78-80

Study Session 1-2-b

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

The client is the trust/trustees, not the beneficiary. Mawar followed Standard III(C), Duties to Clients (Suitability), by managing the assets in a way that would likely result in a stable source of income while keeping the risk profile low.

5. Correct answer: C

2011 Modular Level I, Vol.1, pp. 46-47, 90-91, 145-147

Study Session 1-2-a, b

Demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to situations involving issues of professional integrity.

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

There is no evidence that Chandarana violated Standard VII(B) with regard to his being a CFA Candidate. It does appear that Chandarana did not act with integrity when he hid information that could potentially harm his new employer's reputation, thus violating Standard I(C), Professionalism (Misrepresentation), and Standard IV(A), Duty to Employers (Loyalty).

6. Correct answer: B

2011 Modular Level I, Vol.1, pp. 76, 105, 114, 131

Study Session 1-2-b

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

There is no indication that a violation of this standard (VI(B), Conflicts of Interest (Priority of Transactions)) occurred. The standard concerns transactions for clients having priority over employees' transactions and is not applicable in this case since the manager sells his personal holdings after clients' holdings.

7. Correct answer: A

2011 Modular Level I, Vol.1, pp. 99

Study Session 1-2-c

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

The prospective supervisor's first step should be to bring the inadequate compliance system to the attention of the firm's senior managers and recommend corrective action before taking the position. This may be accomplished by the supervisor taking on an interim consulting role with the bank in order to implement adequate procedures before taking on the supervisory role.

8. Correct answer: A

2011 Modular Level I, Vol.1, pp. 25,76,121

Study Session 1-2-b

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

The utility is not a suitable investment for clients who desire investments in companies with good environmental records

9. Correct answer: A

2011 Modular Level I, Vol.1, p. 137

Study Session 1-2-b

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

violates the Code and Standards.

The reference to the superior management abilities ascribed to the CFA Program is improper. An appropriate reference would be to indicate "completion of the CFA Program has enhanced my portfolio management skills."

10. Correct answer: A

2011 Modular Level I, Vol.1, pp. 467-471

Study Session 2-8-n

Calculate and interpret an updated probability using Bayes' formula.

First, calculate the unconditional probability for a cut in dividends:

$$\begin{aligned} P(\text{Cut div}) &= P(\text{Cut div} \mid \text{EPS exceed}) \times P(\text{EPS exceed}) + \\ &\quad P(\text{Cut div} \mid \text{EPS equal}) \times P(\text{EPS equal}) + \\ &\quad P(\text{Cut div} \mid \text{EPS blow}) \times P(\text{EPS blow}) \\ &= (0.05 \times 0.25) + (0.10 \times 0.055) + (0.85 \times 0.20) = 0.2375 \end{aligned}$$

Then update the probability of EPS falling below the consensus as:

$$\begin{aligned} P(\text{EPS below} \mid \text{Cut div}) &= P(\text{Cut div} \mid \text{EPS blow}) / P(\text{Cut div}) \times P(\text{EPS blow}) \\ &= (0.85 / 0.2375) \times 0.20 = 0.71579 = 72\% \end{aligned}$$

11. Correct answer: A

2011 Modular Level I, Vol.1, pp. 556-559

Study Session 3-10-d

Interpret the central limit theorem and describe its importance.

The central limit theorem establishes that the sampling distribution of sample means will be approximately normal; will have a mean equal to the population mean, and will have a variance equal to the population variance divided by the sample size.

12. Correct answer: A

2011 Modular Level I, Vol.1, pp. 10-11

Study Session 2-6-a, 11-44-d

Calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment.

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 (PI).

Enter the given cash flows and the given discount rate into a financial calculator and solve for NPV. The NPV is -1,780 (negative 1,780).

13. Correct answer: A

2011 Modular Level I, Vol.1, pp.370-373

Study Session 2-7-e

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

mode.

14. Correct answer: C

2011 Modular Level I, Vol.1, pp. 528-535

Study Session 3-9-p

Explain Monte Carlo simulation and historical simulation and describe their major applications and limitations

Monte Carlo simulation provides a distribution of possible solutions to complex functions. The central tendency and the variance of the distribution of solutions give important clues to decision-makers regarding expected results and risk.

15. Correct answer: A

2011 Modular Level I, Vol.1, pp. 343

Study Session 2-7-a, b

Differentiate between descriptive statistics and inferential statistics, between a population and a sample, and among the types of measurement scales.

Define a parameter, a sample statistic, and a frequency distribution,

A sample is a subset of a population,

16. Correct answer: B

2011 Modular Level I, Vol.1, pp. 256-258

Study Session 2-5-b

Explain an interest rate as the sum of a real risk-free rate, expected inflation, and premiums that compensate investors of distinct types of risk.

The nominal rate is equal to the real risk-free rate of return plus an inflation premium plus risk premiums (default, liquidity, maturity preference). In this case, $12 = 3 + 5 + X$. Solve for X. $X = 4$.

17. Correct answer: C

2011 Modular Level I, Vol.2, pp. 87-89

Study Session 4-15-d

Discuss the impact of subsidy, quotas, and markets for illegal goods on demand, supply, and market equilibrium.

Production quotas are most likely to result in underproduction.

18. Correct answer: C

2011 Modular Level I, Vol.2, pp. 16-18

Study Session 4-13-a

Calculate and interpret the elasticities of demand (price elasticity, cross elasticity, and income elasticity) and the elasticity of supply, and discuss the factors that influence each measure.

The longer the time that has elapsed since a price change, the more elastic is demand.

19. Correct answer: B

2011 Modular Level I, Vol.2, pp. 379

Study Session 6-24-f

Describe the monetary base and explain the relation among the monetary base, the money multiplier, and the quantity of money.

The money multiplier is calculated as 1 plus the currency drain ratio divided by the sum of the currency drain ratio and the desired reserve ratio. In this problem, the money multiplier is $(1+1.05)/(1.05+0.02)=1.64$

20. Correct answer: B

2011 Modular Level I, Vol.2, pp. 160-161

Study Session 5-18-a

Describe the characteristics of perfect competition, explain why companies in a perfectly competitive market are price takers, and differentiate between market and company demand curves.

Firms in perfect competition are price takers. A price taker is a firm that cannot influence the market price and that sets its own price at the market price.

21. Correct answer: B

2011 Modular Level I, Vol.2, pp. 435-436

Study Session 6-26-a

Explain supply-side effects on employment, potential GDP, and aggregate supply, including the income tax and taxes on expenditure, and describe the Laffer curve and its relation to supply-side economics.

The Laffer curve argues that when a nation reduces its tax rate from a "too high" tax rate, economic growth will be stimulated to such a degree that tax revenue to the government will actually increase. It is difficult to define exactly how high "too high" is.

22. Correct answer: C

2011 Modular Level I, Vol.2, p. 463

Study Session 6-27-a, b

Discuss the goals of U.S. monetary policy and the Federal Reserve System's means for achieving the goals, including how the Fed operationalizes those goals.

Describe how the Fed conducts monetary policy, and explain the Fed's decision-making strategy, including an instrument rule, a targeting rule, open-market operations, and the market for reserves.

In the United States, the Federal Reserve System is primarily responsible for monetary policy.

23. Correct answer: B

2011 Modular Level I, Vol.3, pp. 18, 23

Study Session 7-29-c, e

Discuss the importance of financial statement notes and supplementary information, including disclosures of accounting methods, estimates, and assumptions, and management's discussion and analysis.

Identify and explain information sources other than annual financial statements and

supplementary information that analysts use in financial statement analysis.

Significant events, conditions, trends, and contingencies that may affect future operations are contained in Management's Discussion and Analysis/ compensation agreements for directors and management and their potential conflicts of interest are required in the proxy statement.

24. Correct answer: C

2011 Modular Level I, Vol.3, pp. 38-43

Study Session 7-30-b, e

Explain the accounting equation in its basic and expanded forms.

Explain the relationships among the income statement, balance sheet, statement of cash flows, and statement of owners' equity.

Start-of-year capital contributed by owners		\$10,000
Additional shares issued		1,000
Initial retained earnings		6,000
Net income	4,000	
Dividends paid	(600)	
Increase in retained earnings	3,400	3,400
Ending owners' equity		\$20,400

25. Correct answer: B

2011 Modular Level I, Vol.3, pp. 144-145

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.

The appropriate time to recognize revenue would be in the month of July, the risk and rewards have been transferred to the buyer (shipped and delivered), the revenue can be reliably measured, and it is probable that the economic benefits will flow to the seller (the rigorous credit check was completed). Neither the actual payment date nor the credit card statement date is relevant here.

26. Correct answer: A

2011 Modular Level I, Vol.3, pp. 342-347, 349, 351.

"Cost of Capital," Yves Courtois, CFA, Gene C. Lai, and Pamela Peterson Drake, CFA

2011 Modular Level I, Vol.4, pp. 57, 75

Study Session 8-35-e, f, g;

11-45-h

Demonstrate how ratios are related and how to evaluate a company using a combination of different ratios.

Demonstrate the application of and interpret changes in the component parts of the DuPont analyses (the decomposition of return on equity)

Calculate and interpret the ratios used in equity analysis, credit analysis, and segment

analysis.

Calculate and interpret the cost of equity capital using the capital asset pricing model approach, the dividend discount model approach, and the bond-yield-plus-risk-premium approach.

Sustainable growth rate=retention ratio×ROE

The higher a company's ROE

The higher a company's ROE and its ability to finance itself from internally generated funds (a higher retention ratio), the greater will be its sustainable growth rate.

In the 5 factor ROE, any factor that increases ROE will increase sustainable growth:

ROE= tax burden×interest burden×EBIT margin×asset turnover×leverage

A higher tax burden ratio (Net Income/Earnings before tax) implies that the company can keep a higher percentage of pretax profits: this implies a lower tax rate, and a higher ROE.

The interest burden ratio is Earnings before tax/EBIT, and a lower ratio means that the company has higher borrowing costs (it gets to keep a lower pre-tax income from a given EBIT), implying a lower ROE and sustainable growth.

27. Correct answer: A

2011 Modular Level I, Vol.3, pp. 281-222

Study Session 8-32-b

Explain the measurement bases (e.g., historical cost and fair value) of assets and liabilities, including current assets, current liabilities, tangible assets, and intangible assets.

The customer list is the only identifiable intangible asset and it should be amortized on a straight-line basis over its expected future life: $\$100,000/4=\$25,000$ per year. Goodwill is an generated intangible that is not recorded on the balance sheet and is therefore not amortized,

28. Correct answer: A

2011 Modular Level I, Vol.3, pp. 650-651

Study Session 8-34-c, d; 8-43-c

Compare and contrast the key differences in cash flow statements prepared under international financial reporting standards and U.S. generally accepted accounting principles.

Demonstrate the difference between the direct and indirect methods of presenting cash from operating activities and explain the arguments in favor of each.

Identify and explain the major differences between international and U.S. GAAP accounting standards concerning the treatment of interest and dividends on the statement of cash flows.

The direct method of cash flow statement presentation shows the specific cash inflows and outflows that result in reported cash flow from operating activities; e.g., cash from customers, cash to suppliers, etc. companies using IFRS reporting standards can decide to report interest and dividend receipts as either an investing or an operating activity, whereas under U.S. GAAP, they must report such income as an operating activity. The

listed operating and investment activities indicate that the company reports under IFRS, using the direct method.

29. Correct answer: C

2011 Modular Level I, Vol.3, pp. 386-388

"International Standards Convergence," Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, Elaine Henry, CFA, and Michael A. Broihahn, CFA.

2011 Modular Level I, Vol.3, pp. 639-640, 648

Study Session 9-36-f, 10-43-a

Discuss the measurement of inventory at the lower of cost and net realizable value.

Identify and explain the major international accounting standards for each asset and liability category on the balance sheet and the key differences from U.S. generally accepted accounting principles (GAAP).

Under IFRS, the inventory would be written down to its net realizable value (\$4.1 million) whereas, under U.S. GAAP, market is defined as current replacement cost and hence would be written down to its current replacement cost (\$3.8). The smaller write-down under IFRS will reduce the amount charged to the cost of goods sold, as compared to U.S. GAAP, and result in a higher gross profit of \$0.3 million.

30. Correct answer: C

2011 Modular Level I, Vol.3, pp. 435-436

Study Session 9-37-h

Discuss the impairment of property, plant and equipment, and intangible assets.

Intangible assets with indefinite lives need to be tested for impairment at least annually/ PP&E and intangibles with finite lives are tested only if there has been a significant change or other indication of impairment.

31. Correct answer: B

2011 Modular Level I, Vol.3, pp. 505-508

Study Session 9-39-b

Discuss the effective interest method and calculate interest expense, amortization of bond discounts/premiums, and interest payments.

IFRS recommends the effective interest method for the amortization of bond discounts/premiums. The bond is issued for $0.9228 \times 50 \text{ million} = 46.140$.

32. Correct answer: B

2011 Modular Level I, Vol.3, pp. 562

Study Session 10-40-e

Describe common accounting warning signs and methods for detecting each.

A cash flow earnings index consistently below 1.0 could indicate potential problems in a company's quality of earnings.

33. Correct answer: B

2011 Modular Level I, Vol.3, pp. 591-594

Study Session 10-342-a

Evaluate a company's past financial performance and explain how a company's strategy is reflected in past financial performance.

A strategy of selling differentiated products at premium prices usually requires additional advertising or research and development to support the differentiating features; therefore, the effect on operating profit is normally less than the effect on gross profit margin.

34. Correct answer: A

2011 Modular Level I, Vol.3, pp. 620-625

Study Session 9-39-I, 10-42-e

Calculate and interpret leverage and coverage ratios.

Determine and justify appropriate analyst adjustments to a company's financial statements to facilitate comparison with another company.

The present value of the operating leases should be added to both the total debt and the total assets. To estimate the present value it is appropriate to estimate the number of years of lease payments reflected in the 2016 and thereafter figure. Based on the constant expense shown in the first 5 years, there are 9 (1,260/140) more payments for a total of 14 payments.

Adjusted debt to total assets = $(2,125 + 1,134) / (4,500 + 1,134) = 57.8\%$

35. Correct answer: A

2011 Modular Level I, Vol.4, 47-49

Study Session 11-45-f

Calculate and interpret the cost of fixed-rate debt capital using the yield-to-maturity approach and the debt-rating approach.

Matrix pricing (as described) is an example of the debt-rating approach only.

36. Correct answer: A

2011 Modular Level I, Vol.4, pp. 60-61

Study Session 11-45-i

Calculate and interpret the beta and cost of capital for a project.

Note: (60% debt financing is equivalent to a D/E ratio of $1.50 = 0.60 / (1 - 0.60)$)

$\beta_{\text{Assets}} = \beta_{\text{EQ}} \times [1 / (1 + (1 - t) D/E)] = 1.4 / (1 + (1 - 0.35) \times 1.5) = 0.7089 \approx 0.71$

37. Correct answer: C

2011 Modular Level I, Vol.4, pp. 217-225

Study Session 11-49

The candidate should be able to demonstrate the use of pro forma income and balance sheet statements.

Net Profit Margin = Net Income / Sales =	Earnings Before Tax $\times (1 - \text{Tax Rate}) / \text{Sales}$
=	$0.171 \times \text{Sales} \times (1 - 0.42) / \text{Sales} = 9.92\%$

38. Correct answer: B

2011 Modular Level I, Vol.4, p. 15

Study Session 11-44-d

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 (PI).

Year	Cash Flow	PV (Cash Flow)@ 8%	Amount to Pay Back
0	-75,000	-75,000	75,000
1	21,600	20,000	55,000
2	23,328	20,000	35,000
3	37,791	30,000	5,000
4	40,814	30,000	

The first three cash flows recover \$70,000 (in present value terms) of the cost, making only \$5,000 of the \$30,000 in Year 4 necessary to completely recover the cost. Therefore, the discounted payback is 3.2 years.

For example: PV of Year 2's cash flow is $\$23,328 / [1.08]^2$

39. Correct answer: A

2011 Modular Level I, Vol.4, pp. 103-105

Study Session 11-46-b

Calculate and interpret the degree of operating leverage, the degree of financial leverage, and the degree of total leverage.

$DFL = (\text{Operating Income}) / (\text{Operating Income} - \text{Interest Expense})$

Or operating income divided by pretax earnings

$$= \frac{(\$2.4 + \$1.2)}{\$2.4}$$

$$= 1.50$$

40. Correct answer: B

2011 Modular Level I, Vol.5, p98

Study Session 13-56-d, f

Compare and contrast the different weighting methods used in index construction, Discuss rebalancing and reconstitution,

Fundamentally weighted indices generally will have a contrarian "effect" in that the portfolio weights will shift away from securities that have increased in relative value and toward securities that have fallen in relative value whenever the portfolio is rebalanced.

41. Correct answer: B

2011 Modular Level I, Vol.5, pp. 235

Study Session 14-59-g

Describe product and industry life-cycle models, classify an industry as to life-cycle phase (i.e., embryonic, growth, shakeout, maturity, or decline) based on a description of it, and discuss the limitations of the life-cycle concept in forecasting industry performance.

The shakeout stage is usually characterized by slowing growth, intense competition, and

declining profitability. During the shakeout stage, demand approaches market saturation levels because few new customers are left to enter the market. Competition is intense as growth becomes increasingly dependent on market share gains.

42. Correct answer: A

2011 Modular Level I, Vol.5, pp. 276, 281, 289-291

Study Session 14-60-h

Calculate and interpret the following multiples: price to earnings, price to an estimate of operating cash flow, price to sales, and price to book value.

Earnings growth rate over the period 2006-2009 = $2.05 \times (1+g)^3 = 3.02$; $g = 8.6\%$

Average payout ratio = $(0.60 + 0.50 + 0.70 + 0.64) / 4 = 0.61$

Required rate of return on share $i = \text{Current expected risk-free rate of return} + \text{Beta}_i [\text{Market (equity) risk premium}]$

$= 3\% + 1.3(6.5\%) = 11.5\%$

$P/E_1 = p / (r - g) = 0.61 / (0.115 - 0.086) = 0.61 / 0.029 = 21.0$

43. Correct answer: B

2011 Modular Level I, Vol. 5, pp. 284-286

Study Session 14-60-e

Calculate and interpret the intrinsic value of an equity security based on the Gordon (constant) growth dividend discount model or a two-stage dividend discount model, as appropriate.

Current year's dividend per share = $\$2.50 \times 0.6 = \1.50

$V = 1.50(1.25) / 1.12 + 1.50(1.25)^2 / 1.12^2 + [1.50(1.25)^2 (1.05) / (0.12 - 0.05)] / 1.12^2$
 $= \$1.67 + \$1.87 + 28.03 = \$31.57$

44. Correct answer: A

2011 Modular Level I, Vol. 5, pp. 148-149

Study Session 13-57-g

Compare and contrast the behavioral finance view of investor behavior with that of traditional finance in regards to market efficiency.

According to loss aversion related arguments in behavioral theories, investors dislike losses more than they like comparable gains. Thus, such a behavioral bias can explain observed overreaction in markets.

45. Correct answer: A

2011 Modular Level I, Vol. 5, pp. 250-251

Study Session 14-59-k

Describe the elements that should be covered in a thorough company analysis.

Companies pursuing cost leadership must be able to invest in productivity-improving capital equipment in order to be low-cost producers and maintain efficient operating systems.

46. Correct answer: A

2011 Modular Level I, Vol. 6, pp. 43-44

Study Session 17-69-h

Describe the characteristics of currency forward contracts.

A currency forward contract can settle in cash or with actual delivery of the foreign currencies specified in the contract. This question refers to physical delivery; therefore, Epsilon receives 1,000,000,000 JPY from the dealer in exchange for paying USD.

47. Correct answer: A

2011 Modular Level I, Vol. 6, pp. 103-107

Study Session 17-71-k

Calculate and interpret the lowest prices of European and American calls and puts based on the rules for minimum values and lower bounds

For a European put, the exercise price must be adjusted to the present value since the option can be exercised only on expiration.

48. Correct answer: C

2011 Modular Level I, Vol. 6, pp. 172-175

Study Session 17-73-b

Determine the value at expiration, profit, maximum profit, maximum loss, breakeven underlying price at expiration, and general shape of the graph of a covered call strategy and a protective put strategy, and explain the risk management application of each strategy.

To break even, the underlying stock must be at least as high as the amount expended up front to establish the position. To establish the protective put, the investor would have spent $\$71 + \$1.45 = \$72.45$

49. Correct answer: B

2011 Modular Level I, Vol. 6, pp. 205-207

Study Session 18-74-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.

Using the income approach:

$$(\$2,100,000 - 0.03 \times \$2,100,000 - \$1,600,000) / 0.12 = \$437,000 / 0.12 = \$3,641,666.70$$

The property is appraised based on cash flows and is independent of the financing decision,

50. Correct answer: B

2011 Modular Level I, Vol. 6, pp. 216-218

Study Session 18-74-h

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

You calculate the probability of success as $(1 - 0.25) \times (1 - 0.20) \times (1 - 0.15) \times (1 - 0.15) \times (1 - 0.15) = 0.3685$

Then calculate the NPV from success: $(22,000/1.16^5)-5,000=5,474 \times 0.3685=2,017$
Subtracting the NPV of failure, $-5,000 \times (1-0.3685, \text{ or } 0.632)=-3,157$. The difference between the NPVs is the expected NPV of the project: $2,017-3,157=-1,140$.

51. Correct answer: B

2011 Modular Level I, Vol. 6, pp. 232-233

Study Session 18-74-n

Describe alternative valuation methods for closely held companies and distinguish among the bases for discounts and premiums for these companies.

52. Correct answer: B

2011 Modular Level I, Vol. 6, pp. 325-330

Study Session 15-61-b

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

The security's coupon rate moves in the opposite direction (inversely) with the risk-free rate. (Specifically, the coupon rate = $12.00\% - 2 \times \text{risk-free rate}$)

53. Correct answer: B

2011 Modular Level I, Vol. 5, pp. 356-357

Study Session 15-62-e

Explain the interest rate risk of a floating-rate security and why such a security's price may differ from par value.

The interest rate sensitivity of a floating-rate security comes primarily from the time remaining until its next coupon reset.

54. Correct answer: B

2011 Modular Level I, Vol. 5, pp. 426-427

Study Session 15-63-j

Describe collateralized debt obligations.

A balance sheet transaction is one that removes assets from the balance sheet of the institution, often motivated by the desire to reduce the institution's risk

55. Correct answer: A

2011 Modular Level I, Vol. 5, pp. 496-498

Study Session 16-65-c

Calculate the value of a bond and the change in value that is attributable to a change in the discount rate.

A security with 19 semiannual payments of \$3 interest and a 20th payment of \$103 (interest plus return of face value) with a semiannual discount rate of 3.5% is \$92.89 or

$$\begin{aligned}
& \frac{3}{1.035^1} + \frac{3}{1.035^2} + \frac{3}{1.035^3} + \frac{3}{1.035^4} + \frac{3}{1.035^5} + \frac{3}{1.035^6} + \frac{3}{1.035^7} + \frac{3}{1.035^8} \\
& + \frac{3}{1.035^9} + \frac{3}{1.035^{10}} + \frac{3}{1.035^{11}} + \frac{3}{1.035^{12}} + \frac{3}{1.035^{13}} + \frac{3}{1.035^{14}} + \frac{3}{1.035^{15}} \\
& + \frac{3}{1.035^{16}} + \frac{3}{1.035^{17}} + \frac{3}{1.035^{18}} + \frac{3}{1.035^{19}} + \frac{3}{1.035^{20}} + \frac{103}{1.035^{20}} = 92.89
\end{aligned}$$

56. Correct answer: B

2011 Modular Level I, Vol. 5, pp. 492-495

Study Session 16-65-d

Explain how the price of a bond changes as the bond approaches its maturity date, and calculate the change in value that is attributable to the passage of time.

With 4 years remaining to maturity and a discount rate that is unchanged at 6.0 percent, the value of the bond would be \$103.47 or

$$\frac{7}{1.06^1} + \frac{7}{1.06^2} + \frac{7}{1.06^3} + \frac{107}{1.06^4} = \$104.21 - \$103.47 = \$0.74.$$

57. Correct answer: B

2011 Modular Level I, Vol. 5, pp. 532-523

Study Session 16-67-d

Calculate and interpret the effective duration of a bond, given information about how the bond's price will increase and decrease for given changes in interest rate

The effective duration equals:

$$\begin{aligned}
& (\text{price if rates fall} - \text{price if rates rise}) / (2 \times \text{current price} \times \text{change in rates}) \\
& = (103.28 - 100.81) / (2 \times 101.45 \times 0.0025) = 4.87.
\end{aligned}$$

58. Correct answer: B

2011 Modular Level I, Vol. 4, pp. 281-285

Study Session 12-52-a

Calculate and interpret major return measures and describe their applicability.

The calculations are shown below:

Year	1	2	3	4
Starting balance	\$0.00	\$2,000.00	\$5,275.00	\$4,206.25
New investment at beginning of year	\$2,500.00	\$1,500.00	\$1,000.00	\$0.00
Net balance at beginning of year	\$2,500.00	\$3,500.00	\$6,275.00	\$4,206.25
Investment return for the year	-20%	65%	-25%	10%
Investment gain (loss)	-\$500.00	\$2,275.00	-\$1,568.75	\$420.63
Withdrawal by investor at end of year	\$0.00	-\$500.00	-\$500.00	\$0.00
Balance at end of the year	\$2,000.00	\$5,275.00	\$4,206.25	\$4,626.88

The money weighted return is calculated by solving for i in the equation below:

$$2500 = \frac{-1500}{(1+r)^1} + \frac{-500}{(1+r)^2} + \frac{500}{(1+r)^3} + \frac{4626.88}{(1+r)^4}$$

CF1=-1500

CF2=-500

CF3=1000-500=500

CF4=4,626.88

59. Correct answer: C

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Study Session 12-53-c

Explain systematic and nonsystematic risk, and why an investor should not expect to receive additional return for bearing nonsystematic risk.

Risk that is due to company-specific or industry-specific factors is referred to as unsystematic risk.

60. Correct answer: B

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Study Session 12-54-d

Distinguish between the willingness and the ability (capacity) to take risk in analyzing an investor's financial risk tolerance.

An individual's ability to take risk is impacted by factors such as time horizon and expected income. Personality type is most likely to impact an individual's willing.