

2009 Sample Exam 1 Answers

1. Correct Answer = C

Study Session 1-2-a

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.

Selective disclosure occurs when companies discriminate in making material nonpublic information public. Selective disclosure raises insider trading concerns.

2. Correct Answer=B

Study Session 1-2-a

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 issues of professional integrity.

There is nothing to suggest that Wong does not have a reasonable basis for his conclusion related to Nolvec. However, by delaying the revision of his recommendation so that his brother can buy shares at a lower price, he has violated the CFA Institute Standards relating to duty to client, duty to employer, and priority of transactions.

3. Correct Answer=A

Study Session 1-2-a

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.

Trading on the information is restricted as it relates to a tender offer; it is clearly material, nonpublic information.

4. Correct Answer = C

Study Session 1-2-a

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.

Members should disclose all matters that reasonably could be expected to impair the member's objectivity.

5. Correct Answer = B

Study Session 1-2-a

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 issues of professional integrity.

Members who plan to engage in independent practice for compensation should not render services until receiving written consent from their employer.

6. Correct Answer=C

Study Session 1-4-d

Characterize the eight major sections of the GIPS standards

Alternative Assets is not among the eight major provisions or sections of the Global Investment Performance Standards, which are: Fundamentals of Compliance, Input Data, Calculation Methodology, Composite Construction, Disclosures, Presentation and Reporting, Real Estate, and Private Equity.

7. Correct Answer=A

Study Session 1-2-a

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.

The Standards require that members make reasonable efforts to make sure that performance information is fair, accurate, and complete. They do not require compliance with Global Investment Performance Standards (GIPS), auditing, or verification.

8. Correct Answer = C

Study Session 1-2-a

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.

CFA Institute's Standard relating to market Manipulation requires members/candidates to not engage in practices that distort prices or artificially inflate trading volume with the intent to mislead market participants. Mancini failed to follow regulations on late trading and allowed the hedge fund client to manipulate the time of its trading and thereby mislead other market participants and benefit itself.

9. Correct Answer=B

Study Session 1-2-a

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.

The CFA Institute Standard relating to Responsibilities of Supervisors requires members/candidates to take steps to detect and prevent violations of laws, rules, and regulations. Dunder failed in his supervisory role when he accepted Cheetah's explanation of the unusual trading activity. Dunder should have reviewed the client's goals and objectives, and records, to see if they in fact requested month-end trading. Regardless of the explanation provided by Cheetah, Dunder should have investigated further.

10. Correct Answer = B

Study session 3-10-j

Calculate and interpret a confidence interval for a population mean, given a normal distribution with 1) a known population variance, 2) an unknown population variance, or 3) an unknown variance and the sample size is large.

An increase in the reliability factor increases the width of the confidence interval. Both increasing the sample size and increasing the degrees of freedom shrink the confidence interval.

11. Correct Answer = B

Study Session 3-9-d

Define a discrete uniform random variable and a binomial random variable, calculate and interpret probabilities given the discrete uniform and the binomial distribution functions, and construct a binomial tree to describe stock price movement.

The random variable has a finite number of specified outcomes, and each outcome is equally likely; such a statement makes a complete description of the discrete uniform distribution.

12. Correct Answer=B

Study Session 2-8-l

Calculate and interpret covariance given a joint probability function.

Expected return on security A = $0.6 \times 25\% + 0.4 \times 20\% = 15\% + 8\% = 23\%$

Expected return on security B = $0.6 \times 30\% + 0.4 \times 20\% = 18\% + 8\% = 26\%$

$\text{Cov}(R_A, R_B) = 0.6 [(25 - 23)(30 - 26)] + 0.4 [(20 - 23)(20 - 26)] = 0.6 (2 \times 4) + 0.4 (-3 \times -6) = 0.6 (8) + 0.4 (18) = 4.8 + 7.2 = 12\%$

13. Correct Answer=C

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; and convert among holding period yields, money market yields, effective annual yields, and bond equivalent yields.

The bond equivalent yield for a semiannual pay bond is equal to double the semiannual yield to maturity.

14. Correct Answer=A

Study Session 3-9-g

Construct and interpret a confidence interval for a normally distributed random variable, and determine the probability that a normally distributed random variable lies inside a given confidence interval.

Given that sales are normally distributed, the mean is centered in the interval.

Mean = $(\$230,000 + \$480,000) / 2 = \$355,000$. 99 percent of observations under a normal distribution will be plus/minus three standard deviations.

Thus, $(\$355,000 - \$230,000) / 3.0 = \$41,667$. It is also the case that $(\$480,000 - \$355,000) / 3.0 = \$41,667$

15. Correct Answer=C

Study Session 3-10-e

Calculate and interpret the standard error of the sample mean.

The standard error of the sample mean is equal to the population standard deviation divided by the square root of the number of observations in the sample: $\$3,200,000/\sqrt{36} = \$533,333$.

16. Correct Answer=B

Study Session 2-7-f

Define, calculate, and interpret 1) a range and mean absolute deviation, and 2) the variance and standard deviation of a population and of a sample.

The arithmetic sum of the deviations around the mean will always equal zero.

17. Correct Answer=B

Study session 4-13-a

Calculate and interpret the elasticities of demand (price elasticity, cross elasticity, income elasticity) and the elasticity of supply, and discuss the factors that influence each measure. A decrease in the price of a substitute resource would induce producers to use the substitute resource, reducing demand for the resource in question.

18. Correct Answer=B

Study Session 4-14-e

Explain 1) how efficient markets ensure optimal resource utilization and 2) the obstacles to efficiency and the resulting underproduction or overproduction, including the concept of deadweight loss.

Public goods can be consumed simultaneously by everyone and it is in each person's interest to free ride on everyone else and avoid paying for her or his share of a public good.

19. Correct Answer=B

Study Session 6-26-d, e; 6-27-b,c

Discuss the use of fiscal policy to stabilize the economy, including the effects of the government purchases multiplier, the tax multiplier, and the balanced budget multiplier.

Explain the limitations of discretionary fiscal policy, and differentiate between discretionary fiscal policy and automatic stabilizers.

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.

Discuss monetary policy's transmission mechanism (chain of events) between changing the federal funds rate and achieving the ultimate monetary policy goal when fighting either inflation or recession, and explain loose links and time lags in the adjustment process.

An expansionary fiscal policy means that government increases its purchases of goods and services and/or cuts tax rates to increase aggregate demand.

20. Correct Answer = B

Study session 6-26-b

Discuss the sources of investment finance, and the influence of fiscal policy on capital markets, including the crowding-out effect.

The crowding-out effect would lead to an increase in the real interest rate and an increase in private saving.

21. Correct Answer = C

Study session 5-18-d

Discuss how a permanent change in demand or changes in technology affect price, output, and economic profit.

A permanent decrease in demand in a perfectly competitive industry will in the short-run cause the demand curve to shift to the left, causing prices to fall. However, in the long-run, firms will leave the industry due to economic losses. As firms leave the industry, supply decreases (i.e., the supply curve shifts left-ward) thus increasing prices back to the equilibrium where economic profit is zero.

22. Correct Answer=C

Study Session 5-20-b

Determine the profit-maximizing (loss-minimizing) output under monopolistic competition and oligopoly, explain why long-run economic profit under monopolistic competition is zero, and determine if monopolistic competition is efficient.

As the companies agree to restrict output, market price will rise above average total cost and joint economic profits will accrue.

23. Correct Answer=B

Study Session 8-34-f

Demonstrate the steps in the preparation of direct and indirect cash flow statements, including how cash flows can be computed using income statement and balance sheet data.

The cash collection from sales is equal to:

$$€50,000,000 - (€7,500,000 - €6,000,000) = €48,500,000.$$

24. Correct Answer = C

Study session 8-34-a

Compare and contrast cash flows from operating, investing, and financing activities and classify cash flow items as relating to one of these three categories, given a description of the items.

Cash dividends paid are reported as a cash outflow in the cash flow from financing activities section on the statement of cash flows.

25. Correct Answer = A

Study session 8-34-c, 10-43-c

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

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

U.S.GAAP requires that interest paid be classified as cash from operations; IFRS allows interest paid to be classified as either CFO or CFF.

26. Correct Answer = C

Study session 8-32-k, l; 8-33-h

State the accounting classification for items that are excluded from the income statement but affect owners' equity, and list the major types of items receiving that treatment.

Describe and calculate comprehensive income.

List and explain the components of owners' equity.

The statement of stockholders' equity includes accumulated other comprehensive income that contains the foreign currency translation adjustment.

27. Correct Answer=A

Study Session 10-39-e, 11-47-a

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

Calculate, interpret, and discuss the DuPont expression and extended DuPont expression for a company's return on equity and demonstrate its use in corporate analysis.

The DuPont system can be used to break down ROE into three components:

$ROE = \text{profit margin} \times \text{total asset turnover} \times \text{financial leverage multiplier}$.

Component	Butler		Annandale	
Total asset turnover(sales/total assets)	120/170	1.71	300/140	2.14
Butler has a lower total asset turnover, not higher				
Equity (total assets – total liabilities)	70 - 25	\$45	140 - 40	\$100
Financial leverage multiplier (liabilities/equity)	70/45	1.56	140/100	1.40
Butler has a higher financial leverage multiplier, not lower				

Annandale $ROE = 15\% = (\text{net profit margin}) \times (2.14) \times (1.4)$

Net profit margin is = 5.0%.

Butler $ROE = 15\% = (\text{net profit margin}) \times (1.71) \times (1.56)$

Net profit margin = 5.6%.

(The net profit margin could also be computed by computing net income for each company.

For Annandale, $15\% = \text{net income}/100$, so net income is \$15; $15/300 = 5.0\%$. For Butler,

$15\% = \text{net income}/45$, so net income is 6.75; $6.75/120 = 5.6\%$.)

28. Correct Answer =B

Study session 7-30-g

Describe the flow of information in an accounting system.

Adjusting entries are a type of journal entries typically made at the end of the accounting period to record items such as accruals that are not yet reflected in the accounting system.

29. Correct Answer=B

Study session 8-32-a, g

Describe the components of the income statement and construct an income statement using the alternative presentation formats of that statement.

Discuss the financial reporting treatment and analysis of nonrecurring items (including discontinued operations, extraordinary items, and unusual or infrequent items), and changes in accounting standards.

The disposition of a capital asset is reported as a net gain or loss ($570,000 - 500,000 = 70,000$) on the income statement before tax affects.

30. Correct Answer = C

Study session 8-33-e, g

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.

Demonstrate the appropriate classifications and related accounting treatments for marketable and nonmarketable financial instruments held as assets or owed by the company as liabilities.

Bonds payable issued by a company are financial liabilities that are measured at amortized cost.

31. Correct Answer =C

Study session 10-41

The candidate should be able to analyze and discuss the following ways to manipulate the cash flow statement:

- stretching out payables
- financing of payables
- securitization of receivables
- using stock buybacks to offset dilution of earnings

Using short-term debt to pay down payables will have no effect on the cash from operations. Payables will decrease, which decreases cash from operations, but short-term debt will increase, which is an increase in cash from operations. There would be no net effect. Using a third party to pay payables results in an apparent increase in cash from operations as it allows a company to stretch out its current payables until it pays off the third party.

32. Correct Answer=A

Study Session 9-38-g

Determine the effects of finance and operating leases on the financial statements and ratios of the lessees and lessor.

The adjustments for operating leases would increase the amount of total debt in the debt-equity ratio thus increasing the ratio; the estimated lease interest expense would lower the interest coverage ratio.

33. Correct Answer=C

Study Session 10-39-a

Evaluate and compare companies using ratio analysis, common-size financial statements, and charts in financial analysis.

A common-size balance sheet expresses all balance sheet accounts as a percentage of total assets.

34. Correct Answer=B

Study Session 10-39-c

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

A company operating with old, low-cost equipment that is likely to be fully depreciated would tend to have a high fixed asset turnover ratio.

35. Correct Answer = C

Study Session 11-47-a

Calculate, interpret, and discuss the DuPont expression and extended DuPont expression for a company's return on equity and demonstrate its use in corporate analysis.

The ROE for 2009 is calculated as $ROE = 7.5 \times 0.85 \times 0.67 \times 2.2 \times 1.5 = 14.09$

36. Correct Answer = B

Study Session 11-45-b

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

The cost of debt is adjusted to reflect the tax advantages debt possesses: $8.0\% \times (1-0.4) = 4.8\%$. Equity does not have a tax advantage. Therefore, the cost of equity is not adjusted for taxes.

37. Correct Answer = C

Study Session 11-46-d

Identify and evaluate the necessary tools to use in managing a company's net daily cash position.

A mismatching strategy is the riskiest strategy and requires accurate and reliable cash forecasts.

A matching strategy is the more conservative active strategy (in comparison to a mismatching strategy). A laddering strategy falls somewhere between a matching strategy

and a passive strategy.

38. Correct Answer = C

Study Session 11-44-e

Explain the NPV profile and contrast the NPV and IRR methods when evaluating independent and mutually exclusive projects, and describe the problems that can arise when using an IRR

The internal rate of return method assumes that the cash flows from a project are reinvested at the project's internal rate of return; the net present value method assumes that cash flows are reinvested at the cost of capital. NPV is the preferred method, both because NPV directly measures the gain or loss in wealth from the project and because the reinvestment assumption of the NPV method is the more economically realistic. The IRR method is sensitive to the timing and pattern of the cash flows. In particular, when a project has a nonconventional cash flow pattern, there may be multiple IRRs or no IRR.

39. Correct Answer = A

Study Session 10-39-c, 11-46-b

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

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

The operating cycle = number of days of inventory + number of days of receivables. The number of days of receivables is $365 / 5.6 = 65$ days for the company and $365 / 6.5 = 56$ days for the industry. The number of days of inventory is $365 / 4.2 = 87$ days for the company and $365 / 4 = 91$ days for the industry. The operating cycles are: $65 + 87 = 152$ and $56 + 91 = 147$, respectively. The cash conversion cycle = operating cycle – number of days of payables = $152 - 28 = 124$ for the company and $147 - 36 = 111$ for the industry. Therefore, the operating cycle and cash conversion cycle are both longer for the company.

40. Correct Answer: A

Study Session 14-58-b

Describe and estimate the expected earnings per share (EPS) and earnings multiplier for a company and use the multiple to make an investment decision regarding the company.

An estimate of the earnings per share for the company is a function of the sales forecast and the estimated profit margin. The compounded annual growth of sales (g) between 2001 and 2008 provides an estimate of the expected sales for the year 2009.

$EPS_{2009} = [2008 \text{ Sales} \times (1+g) \times NPM] / \# \text{ of shares.}$

Compounded Annual Sales Growth --- g%	2009 Sales = 2008 Sales $\times (1 + g)$	2009 EPS = 2009 Sales \times NPM / # of Shares
FV = 220; PV = -128.4 N = 7; Compute I / Y (= g); g = 8%	\$220 (1.08) = \$237.60 million	\$237.60 \times 0.07 / 6 = \$2.77

41. Correct answer = A

Study Session 13-52-f

Describe the process of selling a stock short and discuss an investor's likely motivation for selling short.

A short sale is the sale of stock that you do not own with the intent of purchasing it back later at a lower price.

42. Correct Answer = A

Study Session 14-59-b

Calculate and interpret P/E, P/BV, P/S, and P/CF

To normalize the EPS, multiply the current book value per share with the average ROE for the most recent full cycle. Normalized P/E = current market price/ normalized EPS.

The average ROE = $(14+7+8+8)/4=9.25$

Normalized EPS = Normalized ROE \times 2008 BVPS = $0.025 \times 16.30 = \$1.51$

Normalized P/E = $\$40/1.51=\26.5

43. Correct Answer = B

Study Session 13-53-b

Compare and contrast major structural features of domestic and global stock indexes, bond indexes, and composite stock-bond indexes.

According to Exhibit 13 (pp. 54-55), 11 out of the 12 major bond indexed are trader priced and only one index (Ryan Treasury) is market priced.

44. Correct Answer = A

Study Session 13-52-b

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

This secondary market involves trading of securities initially issued in the primary market. Therefore it provides liquidity to the investors who acquired those securities in the primary market. The underwriting of securities is a primary market function and shelf-registration applies to the subsequent issue of securities on a piecemeal basis.

45. Current Answer = B

Study Session 14-56-e

Explain the components of an investor's required rate of return (i.e., the real risk-free rate, the expected rate of inflation, and a risk premium) and discuss the risk factors to be assessed in determining a country risk premium for use in estimating the required return for foreign securities.

The nominal risk-free rate of return includes both the real risk-free rate and the expected rate of inflation. A decrease in inflation expectations would decrease the nominal risk-free rate of return, but would have no effect on the real risk-free rate of return.

46. Correct Answer = B

Study Session 17-71-a

Describe the characteristics of swap contracts and explain how swaps are terminated. Both the initial and the offsetting swap remain in effect, exposing the company to potential default risk.

47. Correct Answer = C

Study Session 17-70-h

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

The lower bound on a European call is either zero or the underlying asset's price minus the present value of the exercise price, whichever is greater.

$$\$1200 - (\$1160 / 1.04^{0.25}) = \$51.32.$$

48. Correct Answer = A

Study Session 17-67-b

Define a forward commitment and a contingent claim, and describe the basic characteristics of forward contracts, futures contracts, options (calls and puts), and swaps. A swap agreement is equivalent to a series of forward agreements that are described as forward commitment derivatives.

49. Correct Answer = C

Study Session 18-73-l

Discuss the performance of hedge funds and the biases present in hedge fund performance measurement, and explain the effect of survivorship bias on the reported return and risk measures for a hedge fund date base.

The presence of infrequently traded assets leads to smoothed pricing that induces a significant downward bias to the measured risk of the assets as well as the correlations of returns with conventional equity and fixed income returns.

50. Correct Answer = B

Study Session 18-73-b, c

Distinguish among style, sector, index, global, and stable value strategies in equity investment and among exchange traded funds (ETFs), traditional mutual funds, and closed end funds.

Explain the advantages and risks of ETFs.

Some sector and international ETFs have large bid-ask spreads and substantial expense ratios compared to managed portfolios, which may provide a more cost-effective alternative to ETFs, particularly for large institutional investors.

51. Correct Answer=A

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 the yield of a real estate investment

Using the income approach:

$$(\$1,800,000 - \$1,200,000) / 0.15 = \$4,000,000$$

52. Correct Answer: C

Study Session 16-66-b

Demonstrate the price volatility characteristics for option-free, callable, prepayable, and puttable bonds when interest rates change.

The bond is option-free and will therefore exhibit positive convexity. An equal change in rates will produce a greater percentage gain when rates decrease than the percentage loss produced when rates increase.

53. Correct Answer = A

Study Session 15-61-n

Explain how yield volatility affects the price of bond with an embedded option and how changes in volatility affect the value of a callable bond and a puttable bond.

Increasing yield volatility increases the value of both put options and call options, which increases the value of a puttable bond but decreases the value of a callable bond.

54. Correct Answer = C

Study Session 16-66-d

Compute 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 rates, and compute the approximate percentage price change for a bond, given the bond's effective duration and a specified change in yield

$$\text{Effective duration} = \frac{100.9254 - 99.0861}{2(100)(0.001)} = 9.2 \text{ years}$$

55. Correct Answer= B

Study Session 15-63-c

Explain the basic theories of the term structure of interest rates and describe the implications of each theory for the shape of the yield curve.

The market segmentation theory asserts that the supply and demand for funds determine the interest rates for each maturity sector.

56. Correct Answer = A

Study Session 16-64-d

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

The price of the bond one year ago was \$90.26 at a yield of 10%.

The price of the bond today assuming a yield of 10% is

$$80 \left[\frac{1 - \frac{1}{(1+0.10)^6}}{0.10} \right] + \frac{100}{(1+0.10)^6} = \$91.29$$

The change in price attributable to moving to maturity = \$91.29 - \$90.26 = \$1.03

57. Correct Answer = B

Study Session 15-61-f

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

A bond's dollar duration is the expected price change given a 100 basis point change in yield. In this case, dollar duration = $5.6 \times 0.01 \times \$5,125,000 = \$287,000$.

58. Correct Answer = C

Study Session 12-51-b

Identify the market portfolio, and describe the role of the market portfolio in the formation of the capital market line (CML).

The only way an investor can achieve a portfolio to the right of the market portfolio is to borrow at the risk-free rate and invest the proceeds in the market portfolio; 100% of the investor's wealth plus the borrowed funds are invested in the market portfolio.

59. Correct Answer = C

Study session 12-49-a

Describe the steps in portfolio management process, and explain the reasons for a policy statement.

An investment policy statement identifies a benchmark portfolio that will be used to judge the performance of the portfolio manager.

60. Correct Answer = C

Study Session 12-50-d

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

$$\text{The correlation coefficient} = r_{ij} = \frac{\text{Cov}_{ij}}{\sigma_i \sigma_j}$$

$$\text{Standard deviation of Libby} = \sqrt{15.5} = 3.937$$

$$\text{Standard deviation of Metromedia} = \sqrt{22.3} = 4.722$$

$$\text{Correlation between Libby and Metromedia} = \frac{8.65}{3.937 \times 4.722} = 0.465$$