2008 Level 1 Mock Exam Volume 5 Answers

1. D

Study Session 1-1-c

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

According to Standard III(E), members must keep information about current, former, and prospective clients confidential unless the information concerns illegal activities on the part of the client.

4. D

Study Session 1-3-a

explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards

Only investment management firms that actually manage assets can claim compliance with the standards. Compliance is a firm-wide process that cannot be achieved on a single product, portfolio, or composite.

5. C

Study Session 1-3-a

explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards

In the past, the investment community had great difficulty making meaningful comparisons on the basis of accurate investment performance data. The GIPS standards ensure fair representation and full disclosure of performance information.

7. D

Study Sessions 1-1-c, 1-2-b

explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each Standard;

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

Members with supervisory responsibility must make reasonable efforts to detect violations of laws, rules, regulations, and the Code and Standards. They exercise reasonable supervision by establishing and implementing written compliance procedures.

9. 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 specific situations presenting multiple issues of questionable professional conduct

The Standards require that members make reasonable efforts to detect and prevent violations of applicable laws, rules, and regulations. Supervisors exercise reasonable supervision by establishing and implementing written compliance procedures and ensuring the procedures are followed through periodic review. Once a supervisor learns of a possible violation, the supervisor must promptly initiate an investigation. Warning the employee to cease the activity, as Abel has done, is not enough. Pending the outcome of the investigation, Abel may need to place limits on the employee's activities to ensure the violations will not be repeated.

11. D
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 specific situations presenting multiple issues of questionable professional conduct
According to the Standards, members must promptly disclose to clients any changes to their investment process. Alvarez should notify his clients promptly of the change in his investment process and strategy.

12. 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 specific situations presenting multiple issues of questionable professional conduct
The Standards do not impose a prohibition on the use of experience or knowledge gained at one employer from being used at another employer. Because records created on behalf of an employer are the property of the firm and not the member, Campbell must take care not to use the property or records of his former employer when creating a model for his new employer.

16. D
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 specific situations presenting multiple issues of questionable professional conduct
Candidates must not participate in any conduct which compromises the reputation or integrity of the CFA Examination.

18. D
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 specific situations presenting multiple issues of questionable professional conduct
Guzdar least likely violates the standard relating to Loyalty, Prudence, and Care as he attempted to provide liquidity to his clients. However, Guzdar's actions inflate trading volumes and distort prices and thus violate the Standard relating to Market Manipulation. Guzdar violates the Standard relating to Misconduct because market manipulation reflects adversely on his professional integrity. Guzdar may also violate the Standard relating to Misrepresentation if he misrepresents the actual liquidity

and value of the stocks held in the portfolios.

19. C

Study Session 2-5-c

calculate and interpret the effective annual rate, given the stated annual interest rate and the frequency of compounding, and solve time value of money problems when compounding periods are other than annual

The effective annual rate (EAR) and interest earned on the alternative investments is:

Quarterly: EAR = $(1.02)^4$ - 1 = 1.082432 - 1 = 0.082432 = 8.2432%

Interest = \$1,000,000 x 8.2432% = \$82,432

Continuous: EAR = *e*0.0795x1 = 1.082746 = 8.2746%

Interest = \$1,000,000 x 8.2746% = \$82,746

Therefore, the CD paying 7.95% compounded continuously offers the highest effective annual rate. Note that the EAR is the same concept as the effective annual yield (EAY) presented in Reading 6

21. D

Study Session 2-6-a

calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment, contrast the NPV rule to the IRR rule, and identify problems associated with the IRR rule

The IRR rule should not be used to differentiate between mutually exclusive projects if the scale of the projects differs or if the timing of the projects' cash flows differs.

22. D

Study Session 2-6-c

calculate, interpret, and distinguish between the money-weighted and time-weighted rates of return of a portfolio and appraise the performance of portfolios based on these measures.

The money-weighted rate of return is the IRR based on the cash flows related to the investment. In this case, a cash outflow of €86 occurs at t=0, another outflow of €94 occurs at t=1, and an inflow of €212 occurs at t=2. Using a financial calculator, the IRR of these cash flows is 11.60%.The time-weighted rate of return is the geometric mean of the annual rates of return in the stock irrespective of the amounts invested in the various time periods. The rate of return for the first period is (94 - 86) / 86 = 9.3023% and for the second period is (106 - 94) / 94 = 12.7660%. The geometric mean is $(1.093023 \times 1.127660)^{0.5} - 1$ = 11.02%.

31. B

Study Session 2-10-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) with an unknown variance and the sample size is large

The width of a confidence interval depends on the size of the standard error. The standard error will be smaller if the sample variance (standard deviation) is smaller and the sample size n is larger.

33. B

Study Session 4-17-d

explain the firm'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
Marginal cost decreases at low outputs because of economies from greater specialization. At higher levels of production, it eventually increases because of the law of diminishing returns.

35. B
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
Structural unemployment refers to the unemployment due to changes in technology, changes in skills needed to perform jobs or changes in the location of jobs. Frictional unemployment, on the other hand, is influenced by unemployment compensation.

36. B
Study Session 6-27-b
Discuss the sources of investment finance and the influence of fiscal policy on capital markets, including the crowding-out effect
The quantity of investment that firms plan to undertake depends only on how productive capital is and what it costs - its real interest rate. Therefore, a tax on interest income has no effect on investment demand. On the other hand, a tax on interest income weakens the incentive to save as savers look at the after-tax real interest rate they receive. The interest rates would rise as a result of the decrease in saving supply.

37. C
Study Session 5-21-g
Differentiate between renewable and non-renewable natural resources and describe the supply curve for each
The quantity of land and other renewable natural resources is fixed and their supply is perfectly inelastic. On the other hand, the flow supply of a nonrenewable natural resource (e.g., oil) is perfectly elastic.

38. C
Study Session 5-21-h
differentiate between economic rent and opportunity costs
When the supply of the factor is perfectly elastic (horizontal supply curve), the factor's entire income comprises opportunity cost. When the supply of the factor is perfectly inelastic (vertical supply curve), the factor's entire income comprises economic rent.

39. B
Study Session 6-26-e
explain the impact of inflation on unemployment, and describe the short-run and long-run Phillips curve, including the effect of changes in the natural rate of unemployment
A change in the natural rate of unemployment shifts both short-run and long-run Phillips curves.

Suppose the natural rate of unemployment increases from 6 to 9%, but the inflation remains constant at 10%. As a result, both short-run and long-run Phillips curves move outward adjusting to the new, higher level of natural unemployment rate. The new point of intersection between the two lines would be at 9% unemployment rate and 10% inflation rate

40. B
Study Session 6-28-c
discuss the fixed-rule and feedback-rule policies to stabilize aggregate supply in response to a productivity shock and a cost-push inflation shock
According to the feedback rule, when the price level rises the Fed decreases the quantity of money in order to reduce aggregate demand. As a result, the price level as well as the real GDP would remain constant.

41. C
Study Session 5-21-a
explain why demand for the factors of production is called derived demand, differentiate between marginal revenue and marginal revenue product (MRP), and describe how the MRP determines the demand for labor and the wage rate
A change in total revenue that results from one more unit of labor is called the marginal revenue product of labor. In a perfectly competitive market, profit is maximized when, at the quantity of labor hired, marginal revenue equals marginal cost and marginal revenue product equals the wage rate. These two conditions are equivalent and the quantity of labor that maximizes profit produces the output that maximizes profit.

42. A
Study Session 5-19-e
explain the potential gains from monopoly and the regulation of a natural monopoly
The marginal cost pricing rule is efficient but it leaves the natural monopoly incurring an economic loss. Therefore, regulators almost never impose marginal cost pricing rule. Instead, they adopt the average cost pricing rule, which allows the firm to cover its costs and earn a normal profit.

43. C
Study Session 6-26-f
explain the relation among inflation, nominal interest rates, and the demand and supply of money
The real interest rate equals the nominal interest rate minus the expected inflation rate, which is the same as nominal interest rate equals the real interest rate plus the expected inflation rate.

44. A
Study Session 6-26-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
An increase in aggregate demand as a result of an increase in government purchases, an example of demand-pull inflation, leads to an increase in both price level and the real GDP.

60. B

Study Session 7-31-b

explain the role of standard-setting bodies, such as the International Accounting Standards Board and the U.S. Financial Accounting Standards Board, and regulatory authorities such as the International Organization of Securities Commissions, the U.K. Financial Services Authority, and the U. S. Securities and Exchange Commission in establishing and enforcing financial reporting standards

Standard-setting bodies such as FASB or IASB are responsible for making the rules and developing accounting standards, whereas regulatory authorities such as the SEC, FSA, or IOSCO have the legal authority to enforce the standards.

63. B

Study Session 7-30-d, 8-33-a

explain the process of recording business transactions using an accounting system based on the accounting equations;

illustrate and interpret the components of the assets, liabilities, and equity sections of the balance sheet, and discuss the uses of the balance sheet in financial analysis

Revenue recognition before the cash is received will result in the creation of an accounts receivable, an asset, whereas when the cash is received before the revenue is recognized a liability, unearned revenue, is created.

64. C

Study Session 9-36-a, b

demonstrate the effects of capitalizing versus expensing on net income, shareholders' equity, cash flow from operations, and financial ratios;

determine which intangible assets, including software development costs and research and development costs, should be capitalized, according to U.S. GAAP and international accounting standards

If all development costs had been expensed then net income would be reduced by the amount spent, and increased by the amortization of the previously capitalized amounts: 225 - 25 + 10 = 210 million. ROA = 210 / 1,875 = 11.2%. CFO would be lower by the amount spent on development 290 - 25 = 265 million. Note: The amortization of previous development costs is a non-cash expense so does not affect cash flow.

66. A

Study Session 9-39-d

classify a debt security with equity features as a debt or equity security and demonstrate the effect of issuing debt with equity features on the financial statements and ratios

The portion of the proceeds attributable to the warrants would be classified as equity, thus the portion classified as a liability would be smaller (lower). The lower balance sheet value would lead to a lower interest expense when it is calculated. The interest expense is based on the liability at the beginning of the period, not the coupon payment.

67. D

Study Session 10-42-b
prepare a basic projection of a company's future net income and cash flow

The cost of goods sold and operating expenses are relatively constant over the two-year period and averages of them can reasonably be used to forecast 2008. Interest expense is declining as a percent of sales, implying it is a fixed cost. Conversion into dollars for each year shows what interest expense has been (2007 = $80, 2006 = $80) and that would be a reasonable projected amount to use. The restructuring charge should not be included as it is a non-recurring item.

The tax rate, 35%, is given.

Sales	$2,250.00
CGS (45%)	1,012.50
Operating expenses (40%)	900.00
Interest expense	80.00
Pretax margin	$257.50
Tax (35%)	90.10
Net income	$167.40

71. A
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, average accounting rate of return (AAR), and profitability index (PI)
Using a calculator with a 13% discount rate, the NPV is €14.85.
The profitability index = 1 + (NPV / initial investment) = 1 + 14.85 / 100) = 1.15.

79. C
Study Session 13-53-a
compare and contrast the characteristics of, and discuss the source and direction of bias exhibited by, each of the three predominant weighting schemes used in constructing stock market indexes, and compute a price-weighted, value-weighted and un-weighted index series for three stocks;
A price-weighted index, such as the Dow Jones Industrial Average, is computed by summing up the prices of individual stocks and dividing by a divisor that is adjusted for stock splits such that the index value is the same before and after the split.

80. C
Study Session 14-58-d, e
discuss the specific advantages of both the concentration ratio and the Herfindahl index;
discuss, with respect to global industry analysis, the elements related to risk, and describe the basic forces that determine industry competition
The "equivalent" number of firms is the reciprocal of Herfindahl Index and it is 10.5 for Industry A and 5.2 for Industry B.

81. B

Study Session 14-59-a
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
CITC is a growth company because its spread between ROA and WACC is larger than the industry average and its dividend yield is 0% compared to the industry average of 1.2%. CITC's stock is a growth stock considering its under-valuation. A speculative stock, on the other hand, would be overvalued.

83. D
Study Session 14-60-b, f
calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM);
describe a process for developing estimated inputs to be used in the DDM, including the required rate of return and expected growth rate of dividends
$V = OFCF_1 / (WACC - g) = 5 (1.06) / (0.124 - 0.06) = 82.81$

84. A
Study Session 14-60-b, f; 8-34-i
calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM);
describe a process for developing estimated inputs to be used in the DDM, including the required rate of return and expected growth rate of dividends; explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios

Time Period	FCFE	PVIF @ 15%	Present Value
1	20 x 1.30 = 26.0	0.8696	€ 22.61
2	$20 \times 1.30^2 = 33.8$	0.7561	€ 25.56
3	$20 \times 1.30^2 \times 1.20 = 40.56$	0.6575	€ 26.67
4 & Beyond	$V_3 = (40.56 \times 1.08) / (0.15 - 0.08) = 625.78$	0.6575	€411.46
Value of Equity			€486.30
Value per share = Value of Equity / # of outstanding shares			€ 9.72

86. C
Study Session 14-58-a
classify business cycle stages and identify attractive investment opportunities for each stage
Neoclassical growth theory assumes that marginal productivity of capital declines as more capital is added. Thus, it predicts that the long-term level of GDP depends on the country's savings rate but not the long-term growth rate because of diminishing marginal returns and reaching a steady state. This implies increase in dividends, as the new level of GDP is reached, but not an increase in the dividend growth rate.

87. D

Study Session 14-52-b, c
distinguish between primary and secondary capital markets, and explain how secondary markets support primary markets; distinguish between call and continuous market
A call market is an exchange (secondary market), not a primary market. Typically, it is characterized by a few listed stocks or a small number of active investor-traders. Buy-sell orders are cleared at a single price (equilibrium price) that satisfies most of the orders.

88. D
Study Sessions 14-60-f, 8-34-i
describe a process for developing estimated inputs to be used in the DDM, including the required rate of return and expected growth rate of dividends; explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios
Free cash flow to equity is after subtracting payments to both debt holders and preferred stockholders.

89. A
Study Session 14-58-e
discuss, with respect to global industry analysis, the elements related to risk, and describe the basic forces that determine industry competition

At high levels of the bargaining power of both buyers and suppliers, the producer would potentially experience a squeeze on profits and profit margins. Therefore, equity investments in producer firms with low levels of bargaining power of both buyers and sellers tend to be more attractive.

92. C
Study Session 17-72-d
describe how a futures contract can be terminated by a close-out (i.e., offset) at expiration (or prior to expiration), delivery, an equivalent cash settlement, or an exchange-for-physicals
To lock in profits, take delivery and pay short the settlement price of the previous day, not the expiration day.

94. B
Study Session 17-73-m
indicate the directional effect of an interest rate change or volatility change on an option's price
When volatility increases, the price of options increase. When interest rates increase, call option prices increase.

103. B
Study Session 15-64-b
Describe the types of securities issued by the U.S. Department of the Treasury (e.g., bills, notes, bonds, and inflation protection securities), and differentiate between on-the-run and off-the-run Treasury securities
First adjust the principal by inflation = $100,000 x 1.05 = $105,000. Then multiply the adjusted principal by the real rate = $105,000 x 0.02 = $2,100.

104. D
Study Session 15-64-f
State the motivation for creating a collateralized mortgage obligation
Adding Tranche B of the CMO to the portfolio will most likely reduce prepayment. A passthrough security, such as a Ginnie Mae, can be prepaid as the underlying loans pay off principal, i.e., they are exposed to prepayment risk. On the other hand, the tranches in a CMO will be paid off sequentially, i.e., Tranche A then Tranche B. Tranche B has less prepayment risk than the underlying passthrough securities.

105. A
Study Session 15-64-h
Describe the characteristics and motivation for the various types of debt issued by corporations (including corporate bonds, medium-term notes, structured notes, commercial paper, negotiable CDs, and bankers acceptances)
Default rates apply to the issuer and would be equal for any security issued by that issuer while the recovery of the unsecured debenture is lower than for the first mortgage bond which is secured.

106. A
Study Session 15-66-a, b
Identify how central bank behavior affects short-term interest rates, systemic liquidity, and market expectations, thereby affecting financial markets; describe the importance of communication between a central bank and the financial markets
Central banks should guide markets and not follow them. The reason for this is that financial markets are susceptible to speculative bubbles that stray from fundamentals. Central bankers must keep their eyes on fundamentals.

108. B
Study Session 15-67-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 bond's price should move downward toward par as time passes given that it trades at a premium and market rates are unchanged.

109. C
Study Session 18-76-e
describe the various approaches to the valuation of real estate
One variation of the sales comparison approach (hedonic price estimation) uses recent transactions in the area to derive an equation that weights various property attributes to determine a value for the property.

111. C
Study Session 18-76-q
Explain the motivation for investing in commodities, commodity derivatives, and commodity-linked

securities
A primary motivation for an investment in commodities, commodity derivatives, commodity-linked bonds, and commodity-linked equity are the diversification benefits provided due to the negative return correlation with other assets and the positive correlation with inflation.

116. C
Study Session 12-49-a
describe the steps in the portfolio management process, and explain the reasons for a policy statement
The final step in the portfolio management process includes evaluating portfolio performance. Evaluation of investor's investment knowledge, investment research, and portfolio construction are part of the first three steps in the process.

117. A
Study Session 12-49-a
describe the steps in the portfolio management process, and explain the reasons for a policy statement
The second step in the portfolio management process includes examining current and projected financial, economic, political, and social conditions. Historical trends may be educational, but the focus of the second phase is determining the short-term and intermediate-term expected conditions to use in constructing a specific portfolio.

119. C
Study Session 12-49-e
describe the importance of asset allocation, in terms of the percentage of a portfolio's return that can be explained by the target asset allocation, and explain how political and economic factors result in differing asset allocations by investors in various countries
The need to invest for portfolio growth is higher in inflationary environments and lower in countries where workers receive generous state pensions.

120. C
Study Session 12-50-c
compute and interpret the expected return, variance, and standard deviation for an individual investment and the expected return and standard deviation for a portfolio
The expected return of the portfolio is the weighted average return of the two assets = 0.60 x 11 + 0.40 x 7 = 9.4%.
The expected standard deviation of the portfolio is calculated as:

$$= \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2\, w_1\, w_2 r_{1,2}\, \sigma_1 \sigma_2} \text{ or } [w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2\, w_1\, w_2 r_{1,2}\, \sigma_1 \sigma_2]^{0.5}$$

$= [(0.60^2 \times 0.05^2) + (0.40^2 \times 0.04^2) + (2 \times 0.60 \times 0.40 \times 0.75 \times 0.05 \times 0.04)]^{0.5}$
$= [0.0009 + 0.000256 + 0.00072]^{0.5}$
$= [0.001876]^{0.5} = 0.0433 \approx 4.3\%$