Sample Level I Multiple Choice Questions

1. Sammy Sneadle, CFA, is the founder and portfolio manager of the Everglades Fund. In its first year the fund generated a return of 30 percent. Building on the fund's performance, Sneadle created new marketing materials that showed the fund's gross 1-year return as well as the 3 and 5-year returns which he calculated by using back-tested performance information. As the marketing material is used only for presentations to institutional clients, Sneadle does not mention the inclusion of back-tested data. According to the *Standards of Practice Handbook*, how did Sneadle violate CFA Institute Standards of Professional Conduct?

   A. He did not disclose the use of back-tested data.
   B. He failed to deduct all fees and expenses before calculating the fund's track record.
   C. The marketing materials only include the Everglades Fund's performance and are not a weighted composite of similar portfolios.

2. Roberto Vargas, CFA, is in charge of the compliance program at his investment firm. According to the *Standards of Practice Handbook*, as a supervisor, Vargas is *least likely* required to:

   A. respond promptly to all violations.
   B. disseminate the contents of the program to all personnel.
   C. incorporate a professional conduct evaluation as part of an employee's performance review.

3. Regarding the definition of the firm, the GIPS Standards require all of the following *except*:

   A. firms must be defined as an investment firm.
   B. a firm's organization alters historical composite results.
   C. total firm assets must be the aggregate of the market value of all discretionary and nondiscretionary assets under management.

4. Under which measurement scale is data categorized, but not ranked?

   A. An ordinal scale.
   B. A nominal scale.
   C. An interval scale.

5. The joint probability of events A and B is 32 percent with the probability of event A being 60 percent and the probability of event B being 50 percent. Based on this information, the conditional probability of event A given event B has occurred is *closest* to:

   A. 30.0%.
   B. 53.3%.
   C. 64.0%.

6. If a firm's long-run average cost of production increases by 15 percent as a result of an 8 percent increase in production the firm is *most likely* experiencing:

   A. economies of scale.
   B. diseconomies of scale.
   C. constant returns to scale.

7. A company currently has a debt-to-equity ratio of 1.25. Common shareholder's equity is $4,000,000, consisting of 1.5 million shares outstanding with a current price of $28/share. Part of the company's debt currently outstanding is $1,000,000 of convertible bonds. Each $1,000 par value bond can be converted into 50 common shares at any time during the next three years. The coupon rate on the bonds is 6 percent with interest paid annually. If all convertible bonds are converted, the company's debt-capital ratio is *closest* to:

   A. 42.5%.
   B. 44.4%.
   C. 80.0%.

8. A company has just issued $5 million of mandatory redeemable preferred shares with a par value of $100 per share and a 7 percent dividend. The issue matures in 5 years. Which of the following statements is *least likely* correct? The company's:

   A. Debt/Total capital ratio will improve.
   B. interest coverage ratio will deteriorate.
   C. preferred shareholders will rank below debt holders should the company file for bankruptcy.

9. The following selected information is from a company's most recent financial statements:

	(£ millions)	
	2008	**2007**
Sales	2,801	2,885
Cost of Goods Sold	1,969	2,071
Interest Expense	123	110
Cash & Marketable Securities	108	105
Accounts Receivable	318	286
Inventories	248	285
Accounts Payable	361	346
Notes Payable	50	99

The 2008 cash conversion cycle, in days, is *closest* to*:*

A. 23.
B. 26.
C. 28.

10. An analyst has calculated the following ratios for a company:

Number of days of receivables	48
Number of days of inventory	37
Number of days of payables	28

The cash conversion cycle for the company is *closest* to:

A. 57 days.
B. 85 days.
C. 113 days.

11. An analyst is developing net present value (NPV) profiles for two investment projects. The only difference between the two projects is that Project 1 is expected to receive larger cash flows early in the life of the project, while Project 2 is expected to receive larger cash flows late in the life of the project. The slope of the NPV profile for Project 1 when compared to the slope of the NPV profile for Project 2 is *most likely*:

A. equal.
B. flatter.
C. steeper.

12. A company wants to determine the cost of equity to use in the calculation of its weighted average cost of capital. The CFO has gathered the following information:

Rate of return on 3-month Treasury bills	3.0%
Rate of return on 10-year Treasury bonds	3.5%
Market equity risk premium	6.0%
The company's estimated beta	1.6
The company's after-tax cost of debt	8.0%
Risk premium of equity over debt	4.0%
Corporate tax rate	35%

Using the bond-yield-plus-risk-premium approach, the cost of equity for the company is *closest* to:

A. 10.6%.
B. 12.0%.
C. 16.3%.

13. A company's $100 par perpetual preferred stock has a dividend rate of 7 percent and a required rate of return of 11 percent. The company's earnings are expected to grow at a constant rate of 3 percent per year. If the market price per share for the preferred stock is $75, the preferred stock is *most* appropriately described as being:

A. overvalued by $11.36.
B. undervalued by $15.13.
C. undervalued by $36.36.

14. An analyst gathers the following information about two companies for the year ending 31 December 2008:

	Company 1	Company 2
Dividend payout ratio	37.5%	40.0%
Return on assets	12%	10.0%
Financial leverage	1.6	2.0

Which of the following *best* describes the expected growth rate of Company 1? The expected growth rate of Company 1 compared to Company 2 is:

A. lower.
B. greater.
C. the same.

15. An equity analyst working for a growth oriented mutual fund has a tendency to misvalue the stocks of popular companies that she has previously recommended and the fund already owns. Her behavior is *most likely* consistent with which of the following biases?

    A. Escalation bias
    B. Prospect theory
    C. Confirmation bias

16. A portfolio manager is evaluating investments in mortgage securities as part of a portfolio to fund long term liabilities. If she wants to minimize prepayment risk in her portfolio she is *most likely* to invest in:

    A. mortgage loans.
    B. mortgage passthrough securities.
    C. collateralized mortgage obligations.

17. An investor purchases a 1-month out-of-the-money American call option on a stock. A week later, the stock price is less than the call option strike price. The time value of the option is *most likely*:

    A. Zero.
    B. A positive amount.
    C. A negative amount.

18. Compared to investors with long investment time horizons, investors with short investment time horizons *most likely* require:

    A. less liquidity and less emphasis on capital appreciation.
    B. more liquidity and less emphasis on capital appreciation.
    C. less liquidity and greater emphasis on capital appreciation.

19. A primary motivation for investment in commodities is *most likely* the:

    A. positive correlation of commodities with unexpected inflation.
    B. positive correlation of commodities with stock and bond investments.
    C. positive volatility of commodities relative to stock and bond investments.

20. Which of the following statements regarding the Markowitz efficient frontier is *least likely* to be correct? The optimal portfolio for:

A. an investor is the portfolio that lies on the efficient frontier and provides her with the greatest level of utility.
B. an investor is found at the point of tangency between the efficient frontier and an investor's highest utility curve.
C. a more risk-averse investor will lie inside the efficient frontier but will lie outside the efficient frontier for a less risk-averse investor.

Answers are provided beginning on the next page.

Answers to Sample Level I Multiple Choice Questions

1. Sammy Sneadle, CFA, is the founder and portfolio manager of the Everglades Fund. In its first year the fund generated a return of 30 percent. Building on the fund's performance, Sneadle created new marketing materials that showed the fund's gross 1-year return as well as the 3 and 5-year returns which he calculated by using back-tested performance information. As the marketing material is used only for presentations to institutional clients, Sneadle does not mention the inclusion of back-tested data. According to the *Standards of Practice Handbook*, how did Sneadle violate CFA Institute Standards of Professional Conduct?

   A. He did not disclose the use of back-tested data.
   B. He failed to deduct all fees and expenses before calculating the fund's track record.
   C. The marketing materials only include the Everglades Fund's performance and are not a weighted composite of similar portfolios.

   ANSWER: A
   "Guidance for Standards I-VII," CFA Institute
   2009 Modular Level I, Vol. 1, pp. 64-65
   Study Sessions 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 on Duties to Clients, Standard III (D), prohibits members/candidates from making any statements that misrepresent the performance achieved by them or their firms and requires every reasonable effort to be made to ensure that performance information is fair, accurate, and complete. By failing to clearly identify the simulated performance results, Snead violated the standard. Snead should have disclosed the fact that the returns were generated only in one year of the fund's operation and the other performance information was back-tested.
   Standard III (D) Duties to Clients: Performance Presentation.

2. Roberto Vargas, CFA, is in charge of the compliance program at his investment firm. According to the *Standards of Practice Handbook*, as a supervisor, Vargas is *least likely* required to:

   A. respond promptly to all violations.
   B. disseminate the contents of the program to all personnel.
   C. incorporate a professional conduct evaluation as part of an employee's performance review.

   ANSWER: B
   "Guidance for Standards I-VII," CFA Institute
   2009 Modular Level I, Vol. 1, pp. 76-78

Study Sessions 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.

According to Standard IV (C) Duties to Employers: Responsibilities of Supervisors, members must make reasonable efforts to detect and prevent violations of applicable laws, rules, regulations, and the Code and Standards. Supervisors must disseminate the contents of the program to appropriate personnel. It is unnecessary to disseminate the contents of the program to all employees.

3. Regarding the definition of the firm, the GIPS Standards require all of the following *except*:

   A. firms must be defined as an investment firm.
   B. a firm's organization alters historical composite results.
   C. total firm assets must be the aggregate of the market value of all discretionary and nondiscretionary assets under management.

   ANSWER: B
   "Global Investment Performance Standards," CFA Institute, 2005
   2009 Modular Level I, Vol. 1, p. 134
   Study Session 1–4–b
   Describe the scope of the GIPS standards with respect to an investment firm's definition and historical performance record.

   A reorganization of a firm does not permit any alteration of historical composite results.
   A firm is defined as a distinct business entity and does not include fund sponsors or consultants.
   Total firm assets must be the aggregate of the market value of all discretionary and nondiscretionary assets under management within the defined firm. This includes both fee-paying and non-fee-paying assets.

4. Under which measurement scale is data categorized, but not ranked?

   A. An ordinal scale.
   B. A nominal scale.
   C. An interval scale.

   ANSWER: B
   "Statistical Concepts and Market Returns," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkle
   2009 Modular Level I, Vol. 1, page 242
   Study Session 2-7-a

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

Data is categorized, but not ranked under a nominal scale. Under an ordinal scale data is ranked, while under an interval scale, data is ranked and separated by equal intervals.

5. The joint probability of events A and B is 32 percent with the probability of event A being 60 percent and the probability of event B being 50 percent. Based on this information, the conditional probability of event A given event B has occurred is *closest* to:

   A. 30.0%.
   B. 53.3%.
   C. 64.0%.

   ANSWER: C
   "Probability Concepts," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkle
   2009 Modular Level I, Vol. 1, p. 325
   Study Session 2-8-d, e
   Distinguish between unconditional and conditional probability.
   Calculate and interpret 1) the joint probability of two events, 2) the probability that at least one of the two events will occur, given the probability of each and the joint probability of the two events, and 3) a joint probability of any number of independent events.

   The conditional probability of A given that B has occurred is equal to the joint probability of A and B divided by the probability of B. In this case, $P(A|B) = P(AB)/P(B) = 32\%/50\% = 64.0\%$.

6. If a firm's long-run average cost of production increases by 15 percent as a result of an 8 percent increase in production the firm is *most likely* experiencing:

   A. economies of scale.
   B. diseconomies of scale.
   C. constant returns to scale.

   ANSWER: B
   "Output and Costs," Michael Parkin
   2009 Modular Level I, Vol. 2, p. 143
   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.

As a company faces diseconomies of scale when long-term average production costs rise faster than increases in production. When diseconomies of scale are present, the LRAC curve slopes upward. The main source of diseconomies of scale is the difficulty of managing a very large enterprise.

7. A company currently has a debt-to-equity ratio of 1.25. Common shareholder's equity is $4,000,000, consisting of 1.5 million shares outstanding with a current price of $28/share. Part of the company's debt currently outstanding is $1,000,000 of convertible bonds. Each $1,000 par value bond can be converted into 50 common shares at any time during the next three years. The coupon rate on the bonds is 6 percent with interest paid annually. If all convertible bonds are converted, the company's debt-capital ratio is *closest* to:

   A. 42.5%.
   B. 44.4%.
   C. 80.0%.

   ANSWER: B
   "Long-term Liabilities and Leases," Elizabeth Gordon and R. Elaine Henry, CFA
   2009 Modular Level I, Vol. 3, pp.438-440,
   "Financial Analysis Techniques," Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn
   2009 Modular Level I, Vol. 3, p. 511
   Study Session 9-38-e, 10-39-d
   Describe two types of debt with equity features (convertible debt and debt with warrants) and calculate the effect of issuance of such instruments on a company's debt ratios. Demonstrate how ratios are related and how to evaluate a company using a combination of different ratios.

   Under U.S. GAAP, if the bonds are converted, liabilities are decreased by the book value of the bonds, and the equity is increased by the same amount.
   Debt/Equity = 1.25; Equity = $4,000,000
   Debt = 1.25 x $4,000,000 = $5,000,000
   Shares issued on conversion: $1,000,000/$1,000/bond x 50 shares/bond = 50,000 shares
   Equity Issued: $1,000,000
   Debt Reduction: $1,000,000 resulting in $4,000,000 outstanding
   New Debt/Capital ratio: Debt/(Debt + Equity) = $4,000,000/($4,000,000+$5,000,000) = 44.4%

8. A company has just issued $5 million of mandatory redeemable preferred shares with a par value of $100 per share and a 7 percent dividend. The issue matures in 5 years. Which of the following statements is *least likely* correct? The company's:

   A. Debt/Total capital ratio will improve.
   B. interest coverage ratio will deteriorate.
   C. preferred shareholders will rank below debt holders should the company file for bankruptcy.

   ANSWER: A
   "Understanding the Balance Sheet," Thomas R. Robinson, CFA, Jan Hendrik van Greuning, CFA, R. Elaine Henry, CFA, and Michael A. Broihahn, CFA
   2009 Modular Level I, Vol. 3, p.220
   "Long-term Liabilities and Leases," Elizabeth Gordon and R. Elaine Henry, CFA
   2009 Modular Level I, Vol. 3 pp. 442-445
   Study Session 8-33-h, 9-38-c,
   Describe the presentation of, and disclosures relating to, financing liabilities.
   List and explain the components of owners' equity.

   SFAS 150 require that issuers report as liabilities any financial instruments that will require repayment of principal in the future. Mandatory redeemable preferred shares (which used to be reported as equity) now must be reported as debt; dividends on such stock must be reported as interest expense (consistent with the view that the preferred stock is debt).

   In the Debt/(Debt + Equity) ratio, the Debt will increase making the debt/total capital increase, (the numerator will increase more than the denominator), thus the ratio will increase (deteriorate), not decrease (improve).

9. The following selected information is from a company's most recent financial statements:

	(£ millions)	
	2008	**2007**
Sales	2,801	2,885
Cost of Goods Sold	1,969	2,071
Interest Expense	123	110
Cash & Marketable Securities	108	105
Accounts Receivable	318	286
Inventories	248	285
Accounts Payable	361	346
Notes Payable	50	99

   The 2008 cash conversion cycle, in days, is *closest* to*:*

A. 23.
B. 26.
C. 28.

ANSWER: A
"Financial Analysis Techniques," Thomas R. Robinson, CFA, Hennie van Greuning, CFA, Elaine Henry, CFA, and Michael A. Broihahn, CFA
2009 Modular Level I, Vol. 3, pp. 507-509
"Working Capital Management," Edgar A. Norton, Jr., CFA, Kenneth L. Parkinson, and Pamela P. Peterson, CFA
2009 Modular Level I, Vol. 4, pp.89-93
Study Session 10-39-c, 11-46-a
Calculate, classify and interpret activity, liquidity, solvency, profitability, and valuation ratios.
Calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies.

Inventory Turnover	7.39	COGS/Average Inventory	1969/(248+285)/2
DOH (days on hand)	49.4	365/Inventory Turnover	365/7.39
Receivable Turnover	9.27	Sales/Average Receivables	2801/(318+286)/2
DSO (days sales o/s)	39.4	365/Receivables Turnover	365/9.27
Payables Turnover	5.57	COGS/Average Payables	1969/(361+346)/2
Days in Payables	65.5	365/Payables Turnover	365/5.57
Cash Conversion Cycle	**23.3**	**DOH + DSO – Days In Payables**	**49.4 + 39.4 – 65.5**

10. An analyst has calculated the following ratios for a company:

Number of days of receivables	48
Number of days of inventory	37
Number of days of payables	28

The cash conversion cycle for the company is *closest* to:

A. 57 days.
B. 85 days.
C. 113 days.

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

2009 Modular Level I, Vol. 3, p. 508
"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela P. Peterson
2009 Modular Level I, Vol. 4, p. 93
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 cash conversion cycle = number of days of inventory + number of days of receivables – number of days of payables = 48 + 37 – 28 = 57.

11. An analyst is developing net present value (NPV) profiles for two investment projects. The only difference between the two projects is that Project 1 is expected to receive larger cash flows early in the life of the project, while Project 2 is expected to receive larger cash flows late in the life of the project. The slope of the NPV profile for Project 1 when compared to the slope of the NPV profile for Project 2 is *most likely*:

    A. equal.
    B. flatter.
    C. steeper.

    ANSWER: B
    "Capital Budgeting," John D. Stowe and Jacques R. Gagné
    2009 Modular Level I, Vol. 4, pp. 19-21
    Study Session 11-44-e
    Explain the NPV profile, compare 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.
    A delay in the receipt of cash flows (as in Project 2) will make a project's net present value more sensitive to changes in the discount rate; the increased sensitivity is illustrated by a steeper slope in the net present value profile.

12. A company wants to determine the cost of equity to use in the calculation of its weighted average cost of capital. The CFO has gathered the following information:

Rate of return on 3-month Treasury bills	3.0%
Rate of return on 10-year Treasury bonds	3.5%
Market equity risk premium	6.0%
The company's estimated beta	1.6
The company's after-tax cost of debt	8.0%
Risk premium of equity over debt	4.0%
Corporate tax rate	35%

Using the bond-yield-plus-risk-premium approach, the cost of equity for the company is *closest* to:

A. 10.6%.
B. 12.0%.
C. 16.3%.

ANSWER: C
"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela P. Peterson
2009 Modular Level I, Vol. 4, p. 53
Study Session 11-45-h
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.

The cost of equity using bond-yield-plus-risk-premium approach is the before-tax cost of debt plus the risk premium of equity over debt. The before-tax cost of debt is the after-tax cost divided by 1 minus the tax rate. 8.0%/(1 – 0.35) = 12.3%. Adding the risk premium results in 12.3% + 4% = 16.3%.

13. A company's $100 par perpetual preferred stock has a dividend rate of 7 percent and a required rate of return of 11 percent. The company's earnings are expected to grow at a constant rate of 3 percent per year. If the market price per share for the preferred stock is $75, the preferred stock is *most* appropriately described as being:

A. overvalued by $11.36.
B. undervalued by $15.13.
C. undervalued by $36.36.

ANSWER: A
"An Introduction to Security Valuation," Frank K. Reilly and Keith C. Brown
2009 Modular Level I, Vol. 5, pp. 122-123
Study Session 14-56-c
Calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM).

Value of perpetual preferred stock = Dividend / Investor's required rate of return
$7/ 0.11 = $63.64. The stock is overvalued by $75.00 – 63.64 = $11.36.

14. An analyst gathers the following information about two companies for the year ending 31 December 2008:

	Company 1	Company 2
Dividend payout ratio	37.5%	40.0%
Return on assets	12%	10.0%
Financial leverage	1.6	2.0

Which of the following *best* describes the expected growth rate of Company 1? The expected growth rate of Company 1 compared to Company 2 is:

A. lower.
B. greater.
C. the same.

ANSWER: C
"An Introduction to Security Valuation," Frank K. Reilly and Keith C. Brown
2008 Modular Level I, Vol. 5, pp. 146-147
Study Session 14-56-f, g
Estimate the dividend growth rate, given the components of the required return on equity and incorporating the earnings retention rate and current stock price;
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.

ROE = Return on assets x Financial leverage;
Retention rate = 1 – (Payout ratio);
g = Retention rate x Return on equity
Company 1: ROE = 12% x 1.6 = 19.2%; g = (1 – 0.375) = 12%
Company 2: ROE = 10% x 2.0 = 20.0%; g = (1 – 0.400) = 12%

15. An equity analyst working for a growth oriented mutual fund has a tendency to misvalue the stocks of popular companies that she has previously recommended and the fund already owns. Her behavior is *most likely* consistent with which of the following biases?

A. Escalation bias
B. Prospect theory
C. Confirmation bias

ANSWER: C
"Efficient Capital Markets," Frank K. Reilly and Keith C. Brown
2009 Modular Level I, Vol. 5, pp. 83-84
Study Session 13-54-d
Define behavioral finance and describe overconfidence bias, confirmation bias, and escalation bias.

Confirmation bias refers to the bias of looking for information that supports prior opinions and decisions, which leads to a tendency to misvalue the stocks of popular companies.

16. A portfolio manager is evaluating investments in mortgage securities as part of a portfolio to fund long term liabilities. If she wants to minimize prepayment risk in her portfolio she is *most likely* to invest in:

    A. mortgage loans.
    B. mortgage passthrough securities.
    C. collateralized mortgage obligations.

    ANSWER: C
    "Overview of Bond Sectors and Instruments," Frank J. Fabozzi
    2009 Modular Level I, Vol. 5, pp. 281-288.
    Study Session 15-62-e
    Describe the types and characteristics of mortgage-backed securities and explain the cash flow, prepayments, and prepayment risk for each type.

    Collateralized mortgage obligations or CMOs are structured using tranches that redistribute prepayment risk. Certain tranches are protected from receiving early principal repayments.

17. An investor purchases a 1-month out-of-the-money American call option on a stock. A week later, the stock price is less than the call option strike price. The time value of the option is *most likely*:

    A. Zero.
    B. A positive amount.
    C. A negative amount.

    ANSWER: B
    "Option Markets and Contracts," Don M. Chance
    2009 Modular Level I, Vol. 6, pp. 95-96
    Study Session 17-70-f
    Define intrinsic value and time value, and explain their relationship

    An American option will sell for more than its intrinsic value, implying a positive time value.

18. Compared to investors with long investment time horizons, investors with short investment time horizons *most likely* require:

A. less liquidity and less emphasis on capital appreciation.
B. more liquidity and less emphasis on capital appreciation.
C. less liquidity and greater emphasis on capital appreciation.

ANSWER: B
"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown
2009 Modular Level I, Vol. 4, pp. 207
Study Session 12-49-d
Describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique needs and preferences

Investors with short time horizons generally have a greater need for liquidity and lower risk tolerance because they have less time to recover from any performance shortfalls. Capital appreciation is an aggressive strategy that would not be appropriate.

19. A primary motivation for investment in commodities is *most likely* the:

A. positive correlation of commodities with unexpected inflation.
B. positive correlation of commodities with stock and bond investments.
C. positive volatility of commodities relative to stock and bond investments.

ANSWER: A
"Alternative Investments," Bruno Solnik and Dennis McLeavey
2009 Modular Level I, Volume 6, pp. 222-223
Study Session 18-73-q
Explain the motivation for investing in commodities, commodities 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 unexpected inflation.

20. Which of the following statements regarding the Markowitz efficient frontier is *least likely* to be correct? The optimal portfolio for:

A. an investor is the portfolio that lies on the efficient frontier and provides her with the greatest level of utility.
B. an investor is found at the point of tangency between the efficient frontier and an investor's highest utility curve.
C. a more risk-averse investor will lie inside the efficient frontier but will lie outside the efficient frontier for a less risk-averse investor.

ANSWER: C
"An Introduction to Portfolio Management," Frank K. Reilly and Keith C. Brown
2009 Modular Level I, Vol. 4, pp. 244-245
Study Session 12-50-g
Explain the concept of an optimal portfolio, and show how each investor may have a different optimal portfolio

The optimal portfolio will be different for investors with different levels of risk aversion, yet it will always lie on the efficient frontier, not inside or outside the curve.