

Level I of the CFA® Exam

Mock Questions with Answers - Mock Exam 2025 #4 - First
Session (Ethical and Professional Standards, Quantitative
Methods, Economics & Financial Statement Analysis)

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Q.1 An investor consults an investment manager to advise him regarding a certain portfolio that would give him at least a 7% return on his investment (threshold return). The investment manager presents three portfolios exhibited in the following table:

	Portfolio A	Portfolio B	Portfolio C
Expected Return	19%	23%	36%
Standard Deviation	14%	26%	39%

Using the Safety-First ratio assumption, the portfolio that is the *most suitable* for the investor is:

- A. Portfolio A.
- B. Portfolio B.
- C. Portfolio C.

The Safety-First ratio is a measure used to evaluate the risk of a portfolio by comparing the expected return of the portfolio minus a threshold level to the portfolio's standard deviation. The portfolio with the highest Safety-First ratio is considered the most suitable for an investor because it has the lowest probability of the portfolio returns falling below the investor's threshold level. In this case, the threshold level is a 7% return on investment.

For Portfolio A, the Safety-First ratio is calculated as $(0.19 - 0.07) / 0.14 = 0.8571$. For Portfolio B, the Safety-First ratio is $(0.23 - 0.07) / 0.26 = 0.6154$. For Portfolio C, the Safety-First ratio is $(0.36 - 0.07) / 0.39 = 0.7436$. Comparing these ratios, Portfolio A has the highest Safety-First ratio, indicating that it has the lowest probability of the returns falling below the investor's threshold level of 7%. Therefore, Portfolio A is the most suitable for the investor.

B is incorrect. Although Portfolio B has a higher expected return than Portfolio A (23% compared to 19%), its standard deviation is also higher (26% compared to 14%). This means that the returns of Portfolio B are more volatile and more likely to fall below the investor's threshold level of 7%. The Safety-First ratio of Portfolio B is 0.6154, which is lower than that of Portfolio A (0.8571), indicating a higher probability of the returns falling below the threshold level.

C is incorrect. Despite having the highest expected return of 36%, Portfolio C also has the highest standard deviation of 39%, indicating a high level of volatility and risk. Its Safety-First ratio is 0.7436, which is lower than that of Portfolio A (0.8571). This means that there is a higher probability of the returns of Portfolio C falling below the investor's threshold level of 7% compared to Portfolio A.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 5 - Portfolio Mathematics, LOS 5c: define shortfall risk, calculate the safety-first ratio, and identify an optimal portfolio using Roy's safety-first criterion.

Q.2 Which of the following is the *most appropriate* explanation of a -1 correlation between two random variables?

- A. Both variables move together in a negative direction.
- B. There is no correlation between two random variables.
- C. The movement in one variable will result in the exact opposite proportional movement in the other variable.

The movement in one variable will result in the exact opposite proportional movement in the other variable. This is the most accurate description of a -1 correlation between two random variables. In statistics, a correlation of -1 is known as a perfect negative correlation. This means that every time one variable increases by a certain amount, the other variable decreases by the same amount, and vice versa. This relationship is consistent and proportional. For example, if variable A increases by 10%, variable B will decrease by 10%. This is a fundamental concept in statistics and is used to measure the relationship between two variables.

A is incorrect. In a -1 correlation, the variables move in opposite directions, not the same direction. If one variable increases, the other decreases, and vice versa. The direction of the movement is not necessarily negative. The key point is that the movements are opposite and proportional.

B is incorrect. A -1 correlation is a perfect negative correlation, which means there is a strong relationship between the two variables. The variables move in exact opposite directions in a consistent and proportional manner. Therefore, saying there is no correlation is incorrect. A correlation of 0 would indicate no relationship between the variables, but a correlation of -1 indicates a very strong, negative relationship.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 5 - Portfolio Mathematics, LOS 5b: Calculate and interpret the covariance and correlation of portfolio returns using a joint probability function for returns.

Q.3 Lifeline Inc. is a manufacturer of swimming safety gear. Lifeline intends to expand production by purchasing and converting vacant property for factory use. Total purchase costs will amount to \$350,000. Lifeline will make a down payment of \$50,000 and intends to finance the remainder using a 20-year loan with quarterly payments. The bank has quoted an interest rate of 6% with quarterly compounding, and the first loan payment is due one year from the present day. Each quarterly payment paid by Lifeline Inc. to its bank is *closest to*:

- A. \$4,568
- B. \$6,464
- C. \$7,542

The correct answer is option B, which states that each quarterly payment paid by Lifeline Inc. to its bank is closest to \$6,464. This is calculated using the BAII Plus Pro financial calculator with the following inputs:

- $N = 20 \times 4 = 80$ (since there are 20 years and quarterly payments, multiplying by 4 gives the total number of periods),
- $I/Y = \frac{6}{4} = 1.5\%$ (since the annual interest rate is 6%, divide by 4 for quarterly payments),
- $PV = 300,000$ (the present value, or loan amount),
- $FV = 0$ (since the loan will be fully paid off, the future value is zero).

After inputting these values into the BAII Plus Pro calculator and computing the PMT (periodic payment), the result is approximately:

$$PMT = -6,464.50$$

The negative sign indicates a cash outflow, meaning that Lifeline Inc. will need to make a quarterly payment of about \$6,464 to the bank.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 2 - The time value of money in finance, LOS 2a: Calculate and interpret the present value (PV) of fixed-income and equity instruments based on expected future cash flows.

Q.4 Yard Inc. maintains a defined contribution plan permitting employees to make annual contributions of \$35,000 into the plan. To generate the required annual contribution, several of Yard's employees invest the amount at the end of each year in an exchange-traded fund that will pay an annual return of 8% for the next 35 years. If the plan generates its promised return, the amount of money each employee will have for retirement after making the last payment is *closest*

to:

- A. \$ 0.8 million.
- B. \$6.0 million.
- C. \$6.5 million.

The formula for the future value of an annuity, which represents a series of equal payments made at regular intervals, is as follows:

$$FV = PMT \times \left[\frac{(1 + r)^n - 1}{r} \right]$$

Where:

- PMT is the payment per period (in this case, the annual contribution of \$35,000),
- r is the interest rate per period (8% or 0.08),
- n is the number of periods (35 years).

Substituting the given values into the formula:

$$FV = 35,000 \times \left[\frac{(1 + 0.08)^{35} - 1}{0.08} \right]$$

First, calculate $(1 + 0.08)^{35}$:

$$(1.08)^{35} \approx 14.785$$

Now substitute this into the formula:

$$FV = 35,000 \times \left[\frac{14.785 - 1}{0.08} \right]$$

$$FV = 35,000 \times \left[\frac{13.785}{0.08} \right]$$

$$FV = 35,000 \times 172.3125$$

$$FV \approx 6,031,088.13$$

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 2 - The time value of money in finance, LOS 2a: calculate and interpret the present value (PV) of fixed-income and equity instruments based on expected future cash flows.

Q.5 Singh, an analyst at Delta Advisory Firm, has prepared a regression analysis comparing the price of gold to the average cost of purchases of finished gold jewelry of a retailer of fine jewelry and watches. The regression results are shown in Exhibit 1 below.

Exhibit 1: 1983-2013 Annual Data
(31 Observations)

Variable	Coefficient	SE of Coefficient
Intercept	11.06	7.29
Cost of gold	2.897	0.615

*SEE=117.8

Singh commented "We may have a problem with parameter instability if the relationship between gold prices and jewelry costs has changed over the past 30 years." Baker computes the test statistic and concluded that "We fail to reject the null hypothesis that the slope coefficient is equal to 4.0 at the 5% significance level." Are Singh (Statement 1) and Baker (Statement 2) correct or incorrect regarding the usefulness of regression results described in Exhibit 1 and the value of the slope coefficient? Use the excerpt of the t-table below.

df	p = 0.10	p = 0.05	p = 0.025	p = 0.01	p = 0.005
⋮					
25	1.316	1.708	2.060	2.485	2.787
26	1.315	1.706	2.056	2.479	2.779
27	1.314	1.703	2.052	2.473	2.771
28	1.313	1.701	2.048	2.467	2.763
29	1.311	1.699	2.045	2.462	2.756
30	1.310	1.697	2.042	2.457	2.750
⋮					

- A. Both Singh and Baker: Correct.
- B. Both Singh and Baker: Incorrect.
- C. Singh: Incorrect; Baker: Correct.

p>Both Singh and Baker's statements are correct. The data for regression analysis pertains to a period of more than 30 years, and during this period, the relationship between gold prices and jewelry costs could have changed. This would create parameter instability a regression limitation.

Test statistic is given by:

$$\frac{\hat{b}_1 - b_1}{S_{\hat{b}_1}} = \frac{2.897 - 4.0}{0.615} = -1.793$$

The critical value (t-value at 29 dfs and alpha = 0.025) is 2.045.

Our test statistic lies within the non-rejection region (± 2.045). We, therefore, have insufficient evidence to reject the null hypothesis that the slope coefficient is equal to 4.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 10 -Simple Linear Regression, LOS 10c: calculate and interpret measures of fit and formulate and evaluate tests of fit and of regression coefficients in a simple linear regression.

Q.6 As the sample size increases, the standard error of the sample mean is *most likely* to:

- A. increases.
- B. decreases.
- C. remains unchanged.

As the sample size increases, the standard error of the sample mean decreases. This can be demonstrated using the formula for standard error, which is the standard deviation divided by the square root of the sample size. The formula is represented as:

$$\sigma_x = \frac{\sigma}{\sqrt{n}}$$

Let's consider two different sample sizes for illustration. We will use 5 as the standard deviation, and 20 and 50 as small and large sample sizes respectively. Plugging these values into the formula, we get:

$$\sigma_x = \frac{5}{\sqrt{20}} = 1.118 \text{ and } \sigma_x = \frac{5}{\sqrt{50}} = 0.707$$

As seen from the calculations, as the sample size increases from 20 to 50, the standard error decreases from 1.118 to 0.707. This is because as the sample size increases, the sample variance (variation between observations) increases, but the variance of the sample mean (standard error) decreases. This leads to an increase in precision, which is the ability of the sample mean to estimate the population mean.

A is incorrect. This option suggests that as the sample size increases, the standard error of the sample mean also increases. However, this is not the case. As demonstrated above, the standard error actually decreases as the sample size increases. This is because the standard error is calculated as the standard deviation divided by the square root of the sample size. As the denominator (sample size) increases, the overall value of the standard error decreases.

C is incorrect. This option suggests that the standard error of the sample mean remains unchanged as the sample size increases. However, this is not accurate. As demonstrated above, the standard error decreases as the sample size increases. This is because the standard error is calculated as the standard deviation divided by the square root of the sample size. As the denominator (sample size) increases, the overall value of the standard error decreases.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 7 - Estimation and Inference, LOS 7b: Explain the central limit theorem and its importance for the distribution and standard error of the sample mean.

Q.7 Which of the following is *least likely* an example of non-state actors in geopolitics?

- A. Coca-Cola Company.
- B. The Malaysian parliament.
- C. The CEO of Microsoft Corporation.

The Malaysian parliament is a state actor, not a non-state actor. State actors are entities that possess sovereignty and are recognized by other states. They are typically national governments, political organizations, or country leaders who exert political authority over a country's national security and resources. They have the power to make decisions that affect the entire population of a country. Examples of state actors include presidents, prime ministers, heads of governments, and political organizations. In this case, the Malaysian parliament, being a legislative body of the government, falls under the category of state actors.

A is incorrect. The Coca-Cola Company is an example of a non-state actor. Non-state actors are entities that participate in global political, economic, or financial affairs but do not directly control national security or the country's resources. They do not possess sovereignty and are not recognized by other states. Examples of non-state actors include non-governmental organizations, multinational companies, and influential individuals such as business leaders and cultural icons. The Coca-Cola Company, being a multinational corporation, falls under the category of non-state actors. It does not have the authority to make decisions that affect the entire population of a country, unlike state actors.

C is incorrect. The CEO of Microsoft Corporation is also an example of a non-state actor. Similar to the Coca-Cola Company, the CEO of Microsoft Corporation does not have the authority to make decisions that affect the entire population of a country. While the CEO of Microsoft Corporation may have influence over the company's operations and strategies, this does not equate to the political authority that state actors possess. Therefore, the CEO of Microsoft Corporation is considered a non-state actor in geopolitics.

CFA Level 1, Topic 1 - Economics, Learning Module 5 - Introduction to Geopolitics, LOS 5a: Describe geopolitics from a cooperation versus competition perspective.

Q.8 Profit maximization conditions for firms under imperfect competition is:

- A. Marginal revenue (MR) > Marginal Cost; Total Revenue (TR) = Total Costs (TC).
- B. Marginal Revenue (MR) = Marginal Cost (MC): Total Revenue (TR) - Total Cost (TC) is at its maximum.
- C. Marginal Revenue (MR) = Marginal Cost (MC); Total Revenue (TR) - Total Cost (TC) is at its minimum.

Under imperfect competition, a firm maximizes its profit when it produces up to the point where its marginal revenue equals its marginal cost. This is the point where the firm's profit is maximized because any additional unit of output beyond this point would cost more to produce than it would bring in revenue. Therefore, the firm's total revenue minus its total cost is at its maximum at this point. This is the fundamental principle of profit maximization under imperfect competition.

A is incorrect. If $MR > MC$, it means that the firm can still increase its profit by producing more because the additional revenue from selling one more unit of output (MR) is greater than the additional cost of producing that unit (MC). Therefore, the firm has not yet reached its profit-maximizing level of output. Moreover, when $TR = TC$, the firm is just breaking even, not making any profit. Therefore, this condition does not represent profit maximization.

C is incorrect. While it is true that a firm maximizes its profit when $MR = MC$, the second part of the statement is incorrect. When $TR - TC$ is at its minimum, it means that the firm's profit is at its lowest, not its highest. Therefore, this condition does not represent profit maximization either.

CFA Level 1, Topic 1 - Economics, Learning Module 1 - Firm and Market Structures, LOS 1a: determine and interpret breakeven and shutdown points of production, as well as how economies and diseconomies of scale affect costs under perfect and imperfect competition.

Q.9 Consider the following annual returns:

{ 3.4%, 5.6%, 1.2%, 7.2%, 6.7% } The resulting geometric and arithmetic means returns are closest to:

- A. Geometric mean: 4.79%; Arithmetic mean: 3.14%
- B. Geometric mean: 4.79%; Arithmetic mean: 4.82%
- C. Geometric mean: 3.14%; Arithmetic mean: 4.82%

Geometric Mean:

The geometric mean is calculated by multiplying the annual returns together, raising the result to the power of $\frac{1}{5}$ (since there are five years), and then subtracting 1. The formula is:

$$\text{Geometric Mean} = ((1 + R_1) \times (1 + R_2) \times \cdots \times (1 + R_5))^{\frac{1}{5}} - 1$$

Substituting the given returns:

$$\text{Geometric Mean} = (1.034 \times 1.056 \times 1.012 \times 1.072 \times 1.067)^{\frac{1}{5}} - 1$$

Calculating the product:

$$\text{Product} = 1.2552$$

Now, raising this to the power of $\frac{1}{5}$ and subtracting 1:

$$\text{Geometric Mean} = 1.04679 - 1 = 0.0479 \text{ or } 4.79\%$$

Arithmetic Mean:

The arithmetic mean is calculated by summing the annual returns and dividing by the number of years. The formula is:

$$\text{Arithmetic Mean} = \frac{R_1 + R_2 + R_3 + R_4 + R_5}{5}$$

Substituting the given returns:

$$\text{Arithmetic Mean} = \frac{3.4 + 5.6 + 1.2 + 7.2 + 6.7}{5}$$

Summing the returns gives:

$$\text{Sum} = 24.1$$

Now dividing by 5:

$$\text{Arithmetic Mean} = \frac{24.1}{5} = 4.82\%$$

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 1 - Rates and Returns, LOS 1b: Calculate and interpret different approaches to return measurement over time and describe their appropriate uses.

Q.10 Veronica Rose borrowed \$5,000 from Contra Bank. The terms and conditions of the loan are given in the following table:

Loan	Short term
Amount	\$5,000
Tenure	3 years
Payment	3 equal payments
Rate	3%
Prepayment penalty	\$0

However, Rose decides to make a payment of \$2,000 at the end of the 1st year. The amount of each payment required for the remaining 2 years to pay off the remains of the loan are *closest to*:

- A. \$1,646.22
- B. \$1,676.22
- C. \$1,686.22

Initially, the payments required to be made by Rose so that the loan is completely paid off in three years were calculated as follows: $N = 3$; $I/Y = 3$; $FV = 0$; $PV = 5000$; $CPT \rightarrow$; $PMT = \$1,767.65$. This calculation was based on the assumption that Rose would make three equal payments over the course of three years.

However, Rose decided to make a payment of \$2,000 at the end of the first year. This changed the remaining amount of the loan to \$3,150. Therefore, the payment required to pay off the remains of the loan of \$3,150 in two years was recalculated as follows: $N = 2$; $I/Y = 3$; $FV = 0$; $PV = 3150$; $CPT \rightarrow$; $PMT = \$1,646.22$. This calculation shows that Rose would need to make two payments of \$1,646.22 each in the remaining two years to completely pay off the loan.

B is incorrect. This option suggests that the amount of each payment required for the remaining 2 years to pay off the remains of the loan is \$1,676.22. However, this does not match with the recalculated payment amount of \$1,646.22 based on the payment made by Rose at the end of the first year and the remaining loan amount. Therefore, this option is incorrect.

C is incorrect. This option suggests that the amount of each payment required for the remaining 2 years to pay off the remains of the loan is \$1,686.22. However, this does not match with the recalculated payment amount of \$1,646.22 based on the payment made by Rose at the end of the first year and the remaining loan amount. Therefore, this option is incorrect.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 2- The Time Value of Money in Finance, LOS 2a: Calculate and interpret the present value (PV) of fixed-income and equity instruments based on expected future cash flows.

Q.11 A Certificate of Deposit (CD) pays you 8% per year, compounded annually. You can reinvest the interest at the same rate for the duration of the CD with no withdrawals. The amount of

money you will have at the end of 4 years if you invest \$100,000 currently is *closest to*:

- A. \$108,000.00
- B. \$136,048.90
- C. \$136,856.91

The question requires calculating the Future Value of a lump sum with interim cash (interest) reinvested at the same rate with no withdrawals within the period.

The formula is as follows:

$$FV_N = PV(1 + r)^N$$

Where;

FVN = Future value in 4 years.

PV = Present value of the investment.

r = Annual compound interest rate.

N = Investment period.

Therefore;

$$FV_N = \$100,000(1 + 0.08)^4 = \$136,048.90$$

Using the BAII Plus Pro Calculator;

PV= -\$100,000; N=4; I/Y=8%; PMT=0; CPT =>FV=\$136,048.90

A is incorrect. Relates to the amount in the fund after one year calculated using simple interest as follows:

$$FV_N = \$100,000 + (0.08 \times \$100,000) = \$108,000.00$$

C is incorrect. The calculation has assumed half yearly compounding instead of using annual compounding as follows:

$$FV_N = \$100,000[1 + \frac{0.08}{2}]^{(4 \times 2)} = \$136,856.91$$

CFA Level 1, Topic 1, Learning Module 2 The Time Value of Money in Finance , LOS 2a: Calculate and interpret the present value (PV) of fixed-income and equity instruments based on expected future cash flows .

Q.12 A large positive value of the Spearman rank correlation such as 0.90 would *most likely* indicate that:

- A. a high rank in one year is associated with a low rank in the second year.
- B. a high rank in one year is associated with a high rank in the second year.
- C. a high rank in one year will not have any impact on the rank in the second year.

A large positive value of the Spearman rank correlation, such as 0.90, indicates a strong positive relationship between the two variables being compared. In this case, the variables are the ranks in two consecutive years. The Spearman rank correlation is a non-parametric measure of statistical dependence between two variables, and it ranges from -1 to 1. A value of 1 indicates a perfect positive association, meaning that as one variable increases, the other also increases. A value of -1, on the other hand, indicates a perfect negative association, meaning that as one variable increases, the other decreases. Therefore, a Spearman rank correlation of 0.90 suggests a strong positive association between the ranks in the two years, implying that a high rank in one year is likely to be associated with a high rank in the subsequent year.

A is incorrect. This option suggests that a high rank in one year is associated with a low rank in the second year. This would indicate a negative correlation, which is not consistent with a large positive value of the Spearman rank correlation. A negative correlation would mean that as one variable increases, the other decreases, which is not the case here.

C is incorrect. This option suggests that a high rank in one year will not have any impact on the rank in the second year. This would imply a Spearman rank correlation close to 0, indicating no association between the ranks in the two years. However, a Spearman rank correlation of 0.90 indicates a strong positive relationship, not a lack of association.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 9 - Parametric and Non-Parametric tests of Independence, LOS 9a: Explain parametric and non-parametric tests of the hypothesis that the population correlation coefficient equals zero and determine whether the hypothesis is rejected at a given level of significance.

Q.13 A renowned economist has calculated that the Canadian economy will be in one of 3 possible states in the coming year: Boom, Normal, or Slow. The following table gives the returns of stocks A and B under each economic state:

State	Probability (state)	Return for stock A	Return for stock B
Boom	40%	12%	18%
Normal	35%	10%	15%
Slow	25%	8%	12%

Compute the covariance of the returns for stocks A and B.

- A. 0.0001734

B. 0.0003765

C. 0.103

Covariance is a measure of how much two random variables vary together. It's similar to variance, but where variance tells you how a single variable varies, covariance tells you how two variables vary together.

To calculate the covariance, we first need to determine the expected return for each stock. The expected return for stock A, $E(R_A)$, is calculated as follows:

$$E(R_A) = 0.4 * 0.12 + 0.35 * 0.1 + 0.25 * 0.08 = 0.103$$

Similarly, the expected return for stock B, $E(R_B)$, is calculated as follows:

$$E(R_B) = 0.4 * 0.18 + 0.35 * 0.15 + 0.25 * 0.12 = 0.1545$$

Then, we calculate the covariance of A and B using the formula:

$$\text{Cov}(A, B) = \sum [P(s) * [R_A - E(R_A)] * [R_B - E(R_B)]]$$

For each state (Boom, Normal, Slow), we calculate the product of the probability of the state, the difference between the return of stock A in that state and the expected return of stock A, and the difference between the return of stock B in that state and the expected return of stock B. The sum of these products gives us the covariance of A and B.

For the Boom state, this calculation gives us 0.0001734. For the Normal state, it gives us 0.000004725. And for the Slow state, it gives us 0.0001984. Adding these together, we get the covariance of A and B, which is 0.0003765.

A is incorrect. This option represents the covariance for the returns in the Boom state only. Covariance is a measure of how two variables vary together, and it should take into account all possible states, not just one. Therefore, this option is incorrect because it does not represent the covariance of the returns for stocks A and B across all states.

C is incorrect. This option represents the expected return of stock A, not the covariance of the returns for stocks A and B. The expected return is a measure of the average return that is expected to be earned on an investment, while the covariance is a measure of how two variables vary together. Therefore, this option is incorrect because it does not represent the covariance of the returns for stocks A and B.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 5 - Portfolio Mathematics, LOS 5b: Calculate and interpret the covariance and correlation of portfolio returns using a joint probability function for returns.

Q.14 Two stocks, X and Y, correlate 0.50. Stock Y's return has a standard deviation of 0.26. Given that the covariance between X and Y is 0.005, the variance of returns for stock X is *closest to*;

A. 0.00148

B. 0.0385

C. 0.1300

The between two variables, X and Y is given by:

$$\text{Corr}(X,Y) = \frac{\text{Cov}(X,Y)}{(\sigma_X \times \sigma_Y)}$$

In this formula, $\text{Corr}(X,Y)$ represents the correlation between X and Y, $\text{Cov}(X,Y)$ represents the covariance between X and Y, and σ_X and σ_Y represent the standard deviations of X and Y respectively. The correlation between X and Y is given as 0.50, the covariance between X and Y is given as 0.005, and the standard deviation of Y is given as 0.26. Substituting these values into the formula, we get:

$$0.50 = \frac{0.005}{(\sigma_X \times 0.26)}$$

From this equation, we can solve for σ_X , which represents the standard deviation of X. This gives us:

$$0.13\sigma_X = 0.005$$

$$\sigma_X = 0.0385$$

The variance of a variable is the square of its standard deviation. Therefore, the variance of X, denoted as $V(X)$, is given by:

$$V(X) = 0.0385^2 = 0.00148$$

B is incorrect. This option suggests that the variance of returns for stock X is 0.0385. However, this is the value of the standard deviation of X, not the variance. The variance is the square of the standard deviation, so the correct answer is 0.00148, not 0.0385.

C is incorrect. This option suggests that the variance of returns for stock X is 0.1300. However, this is far greater than the correct value of 0.00148. This discrepancy could be due to a misunderstanding of the relationship between standard deviation and variance, or a miscalculation in the formula for correlation.

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 5 - Portfolio Mathematics, LOS 5b: Calculate and interpret the covariance and correlation of portfolio returns using a joint probability function for returns.

Q.15 The *most appropriate* requirement of the Central Limit Theorem is that it:

- A. requires a finite population variance.
- B. requires the population to be normally distributed.
- C. asserts that, for small sample sizes, the distribution of sample mean will be approximately normal.

The Central Limit Theorem (CLT) is a fundamental theorem in statistics that states that if you have a population with mean μ and standard deviation σ and take sufficiently large random samples from the population with replacement, then the distribution of the sample means will be approximately normally distributed. This will hold true regardless of whether the source population is normal or skewed, provided the sample size is sufficiently large (usually $n > 30$). If the population is normal, then the theorem holds true even for samples smaller than 30. In other words, for a population with any shape of distribution, the distribution of the sample means will take the shape of a normal distribution as the sample size increases.

The Central Limit Theorem does indeed require a finite population variance. This is because the theorem is built on the premise that we are dealing with a population that has a defined and finite variance. If the population variance were infinite, the distribution of sample means would not converge to a normal distribution, no matter how large the sample size. This is a fundamental requirement for the theorem to hold true.

Option B is incorrect. The Central Limit Theorem does not require the population to be normally distributed. This is a common misconception about the theorem. The beauty of the CLT is that it applies to populations with any shape of distribution, not just those that are normally distributed. As long as the sample size is sufficiently large, the distribution of the sample means will be approximately normal. This is one of the reasons why the CLT is so powerful and widely used in statistical analysis.

Option C is incorrect. The Central Limit Theorem does not assert that for small sample sizes, the distribution of the sample mean will be approximately normal. In fact, the theorem states that as the sample size increases, the distribution of the sample means becomes increasingly normal. For small sample sizes, especially for those less than 30, the distribution of the sample means may not be normal, particularly if the population from which the samples are drawn is not normally distributed. This is why in practice, a sample size of 30 or more is often used as a rule of thumb when applying the CLT.

CFA Level 1, Topic 1, Learning Module 7 - Estimation and Inference, LOS 7b: Explain the relationship between normal and lognormal distributions and why the lognormal distribution is used to model asset prices when using continuously compounded asset returns.

Q.16 Which of the following statements is *least accurate* regarding the properties of lognormal distributions?

- A. Lognormal distributions are skewed to the right.
- B. Lognormal distributions can take negative values.
- C. Lognormal distributions are more often used than standard distributions to model asset prices.

Lognormal distributions are bounded by 0 because they cannot take negative values. Since normal distributions can take negative values, and since asset prices cannot be negative, lognormal distributions are more suitable for describing distributions of asset prices.

Exam tip: If you have negative values, your data isn't lognormal.

A is incorrect. it is a true statement. Lognormal distributions are bound by zero; this implies that they do not have negative values and are thus skewed to the right.

C is incorrect. Lognormal distributions are bound by zero and thus cannot take negative values.

CFA Level 1, Topic 1, Learning Module 6 - Simulation Methods, LOS 6a: explain the relationship between normal and lognormal distributions and why the lognormal distribution is used to model asset prices when using continuously compounded asset returns.

Q.17 Which of the following measures would *most likely* be necessary for a country with a "high capital per labor" to increase the growth in its GDP?

- A. Increased capital.
- B. Increased productivity.
- C. Increased growth in technology.

In developed countries where the capital per labor ratio is high, the economy often experiences a phenomenon known as diminishing marginal productivity. This essentially means that as more and more capital is added, the incremental benefit or productivity derived from each additional unit of capital starts to decrease. This is a common occurrence in economies that are already highly capitalized. In such scenarios, simply increasing the amount of capital may not lead to a significant increase in GDP growth. This is why option A, Increased capital, is not the most effective measure for a country with a high capital per labor ratio to increase its GDP growth.

In a highly capitalized economy, technological growth can lead to significant increases in productivity and, consequently, GDP growth. Technological advancements can lead to more efficient production processes, the development of new products and services, and improvements in existing ones. These factors can all contribute to GDP growth. Moreover, technological growth can also lead to the creation of entirely new industries, further contributing to economic growth. Therefore, for a country with a high capital per labor ratio, increasing growth in technology is likely the most effective measure to increase GDP growth.

A is incorrect. The concept of diminishing marginal productivity explains why simply increasing capital in a highly capitalized economy may not lead to significant GDP growth. As more and more capital is added, the incremental benefit or productivity derived from each additional unit of capital starts to decrease. Therefore, while increasing capital can contribute to GDP growth, it is not the most effective measure in an economy with a high capital per labor ratio.

B is incorrect. Increased productivity can certainly contribute to GDP growth. However, in a highly capitalized economy, productivity is often already optimized. Therefore, the potential for significant GDP growth through increased productivity alone is limited. Moreover, productivity is often linked to other factors such as technology and innovation, which are not directly addressed by this option.

CFA Level 1, Topic 1 - Economics, Learning Module 6 - International Trade, LOS 6b: Compare types of trade restrictions, such as tariffs, quotas, and export subsidies, and their economic implications.

Q.18 Zeng is developing a regression model to predict stock market returns using the GDP growth rate. He considers quarterly returns of the S&P 500 (S&P) as a proxy for stock market returns and quarterly changes in GDP as GDP growth rate (GDP Growth). The linear regression model is as follows:

$$\text{S\&P} = \beta_0 + \beta_1(\text{GDP Growth}) + e$$

Zeng develops the following regression statistics based on the last 10 years of quarterly data pertaining to the S&P 500 and GDP.

Exhibit 1: Regression Statistics

	Coefficient	Standard Error
Intercept	0.5125	0.0366
Slope	3.8426	0.0534

The *most appropriate* interpretation of the slope coefficient is:

- A. 3.8426% change in GDP growth rate per one per cent change in S&P 500.
- B. 3.8426 units of change in GDP growth rate per unit change in S&P 500 return.
- C. 3.8426 units of change in S&P 500 return per unit change in GDP growth rate.

In the given regression model, the S&P 500 return is the dependent variable and the GDP growth rate is the independent variable. The slope coefficient, denoted by β_1 in the regression equation, measures the amount of change in the dependent variable (S&P 500 return) for a one-unit change in the independent variable (GDP growth rate). In this case, the slope coefficient is 3.8426, which means that for every one unit increase in the GDP growth rate, the S&P 500 return is expected to increase by 3.8426 units. This interpretation is consistent with the nature of the regression model, which is designed to predict the S&P 500 return based on the GDP growth rate. Therefore, the most appropriate interpretation of the slope coefficient is that it represents a 3.8426 units of change in S&P 500 return per unit change in GDP growth rate.

A is incorrect. This option suggests that the slope coefficient represents a 3.8426% change in GDP growth rate per one per cent change in S&P 500. This interpretation is incorrect because it reverses the roles of the dependent and independent variables in the regression model. In the given model, the S&P 500 return is the dependent variable and the GDP growth rate is the independent variable, not the other way around. Therefore, the slope coefficient cannot represent a change in the independent variable (GDP growth rate) per change in the dependent variable (S&P 500).

B is incorrect. This option suggests that the slope coefficient represents a 3.8426 units of change in GDP growth rate per unit change in S&P 500 return. Similar to option A, this interpretation is incorrect because it reverses the roles of the dependent and independent variables in the regression model. The slope coefficient measures the change in the dependent variable (S&P 500 return) per change in the independent variable (GDP growth rate), not the other way around. Therefore, the slope coefficient cannot represent a change in the independent variable (GDP growth rate) per change in the dependent variable (S&P 500 return).

CFA Level 1, Topic 1 - Quantitative Methods, Learning Module 10 -Simple Linear Regressions, LOS 10a: Describe a simple linear regression model, how the least squares criterion is used to estimate regression coefficients, and the interpretation of these coefficients.

Q.19 Which of the following policy combinations is *most likely* to lead to a reduction in aggregate demand from both the public and private sectors?

- A. Tight fiscal policy/easy monetary policy
- B. Easy fiscal policy/tight monetary policy
- C. Tight fiscal policy/tight monetary policy

Fiscal policy refers to the use of government revenue collection (taxation) and expenditure (spending) to influence the economy. A tight fiscal policy implies higher taxes and reduced government spending. Higher taxes reduce the disposable income of consumers, thereby reducing their purchasing power and overall demand. Reduced government spending also means less money is injected into the economy, leading to a decrease in demand from the public sector.

Monetary policy, on the other hand, involves the management of money supply and interest rates by the central bank to control inflation and stabilize the economy. A tight monetary policy implies higher interest rates. Higher interest rates make borrowing more expensive, which discourages businesses from taking loans for investment purposes. This leads to a decrease in investment and subsequently, a decrease in private sector demand.

Therefore, a combination of tight fiscal policy and tight monetary policy, as suggested in option C, would lead to a reduction in aggregate demand from both the public and private sectors.

Option A is incorrect. While a tight fiscal policy would reduce public sector demand, an easy monetary policy, characterized by low interest rates, would stimulate private sector demand. Low interest rates make borrowing cheaper, encouraging businesses to take loans for investment purposes, thereby increasing private sector demand. This could offset some of the reduction in demand caused by the tight fiscal policy, leading to an uncertain effect on aggregate demand.

Option B is incorrect. An easy fiscal policy, characterized by lower taxes and increased government spending, would increase public sector demand. Lower taxes increase the disposable income of consumers, thereby increasing their purchasing power and overall demand. Increased government spending injects more money into the economy, leading to an increase in public sector demand. However, a tight monetary policy, characterized by higher interest rates, would reduce private sector demand. This could offset some of the increase in demand caused by the easy fiscal policy, leading to mixed effects on aggregate demand.

Level 1, Topic 1, Economics, Learning Module 4: Monetary Policy LOS 4e: explain the interaction of monetary and fiscal policy.

Q.20 If the marginal propensity to consume is 60% and tax rate is 30%, the fiscal multiplier is *most likely*:

A. 1.72

B. 1.90

C. 3.33

The fiscal multiplier is a key concept in macroeconomics that measures the impact of changes in government spending on the overall economic activity. It is calculated by dividing 1 by 1 minus the product of the marginal propensity to consume (MPC) and 1 minus the tax rate. The MPC is the proportion of an aggregate raise in pay that a consumer spends on the consumption of goods and services, as opposed to saving it. Meanwhile, the tax rate is the percentage at which an individual or corporation is taxed.

Given the MPC of 60% (or 0.6) and a tax rate of 30% (or 0.3), the fiscal multiplier can be calculated as follows:

$$\begin{aligned}\text{Fiscal multiplier} &= \frac{1}{(1 - \text{MPC}(1 - \text{Tax}))} \\ &= \frac{1}{(1 - 0.6(0.7))} \\ &= 1.72\end{aligned}$$

This calculation indicates that for every dollar increase in government spending, the national income increases by \$1.72, given the specified MPC and tax rate. This is due to the multiplier effect, where an increase in spending leads to an increase in income, which in turn leads to more consumption and further increases in income, creating a cycle of economic activity.

CFA Level I, Topic 2, Economics, Learning Module 3: Fiscal Policy. LOS c: Describe tools of fiscal policy, including their advantages and disadvantages.

Q.21 Selena Roberts manages an equity fund allocated to U.S. and Canadian equities in the proportions 45% and 55% respectively. The expected returns and covariance matrix between the two equities are illustrated in the table below:

	U.S.	Canadian
Equity	E(R) = 15%	E(R) = 25%
	Covariance Matrix	
	U.S.	Canadian
U.S.	200	125
Canadian	125	350

The correlation between the two stocks is *closest to*:

- A. 0
- B. 0.05
- C. 0.47

The correlation between two variables, in this case, the returns of U.S. and Canadian equities, is calculated by dividing the covariance of the two variables by the product of their standard deviations. The covariance between the returns of U.S. and Canadian equities is given as 125. The variances of the returns of U.S. and Canadian equities are given as 200 and 350 respectively. The standard deviation is the square root of the variance, so the standard deviations of the returns of U.S. and Canadian equities are $(200)^{0.5}$ and $(350)^{0.5}$ respectively.

Substituting these values into the formula for correlation, we get $\text{Corr}(\text{Returns U.S.}, \text{Returns CAD}) = \text{Cov}(\text{Returns U.S.}, \text{Returns CAD}) / [\sigma(\text{Returns U.S.}) \times \sigma(\text{Returns CAD})] = 125 / [(200)^{0.5} \times (350)^{0.5}] = 0.47$. This is closest to option C, 0.47. Hence, the correlation between the returns of U.S. and Canadian equities is closest to 0.47.

A is incorrect. A correlation of 0 would imply that there is no linear relationship between the returns of U.S. and Canadian equities. This is not the case here as the covariance between the returns of U.S. and Canadian equities is given as 125, which is not zero. Therefore, a correlation of 0 is not possible in this case.

B is incorrect. A correlation of 0.05 would imply a very weak positive linear relationship between the returns of U.S. and Canadian equities. However, the calculated correlation is 0.47, which indicates a moderate positive linear relationship. Therefore, a correlation of 0.05 is not accurate in this case.

CFA Level 1, Topic 2 - Quantitative Methods, Learning Module 5 - Portfolio Mathematics, LOS 5b: Calculate and interpret the covariance and correlation of portfolio returns using a joint probability function for returns.

Q.22 In which of the following exchange rate strategies can a country make an explicit commitment to exchange its domestic currency for a specified foreign currency at a fixed rate?

- A. Target zone.
- B. Monetary union.
- C. Currency board arrangement.

A currency board arrangement is a monetary authority which is required to maintain a fixed exchange rate with a foreign currency. This policy objective requires the conventional objectives of a central bank to be subordinated to the exchange rate target. In this arrangement, the country makes an explicit commitment to exchange its domestic currency for a specified foreign currency at a fixed rate. This means that the domestic currency will be fully convertible into the foreign currency at the fixed rate at any time. The currency board needs to ensure the maintenance of sufficient reserves to guarantee the full convertibility of the domestic currency. This arrangement provides a high degree of exchange rate security, reduces inflation, and can promote trade and investment.

A is incorrect. A target zone arrangement is a type of exchange rate regime wherein the currency's value is allowed to fluctuate between a range or band of values. This is different from a currency board arrangement because it does not involve a fixed exchange rate. Instead, the exchange rate is allowed to fluctuate within a certain range around a central rate. The central bank intervenes in the foreign exchange market only when the exchange rate reaches the boundaries of the target zone. This arrangement provides some flexibility in monetary policy but does not provide the same level of exchange rate security as a currency board arrangement.

B is incorrect. A monetary union is an arrangement where two or more countries use the same currency. In this case, there is no need for an exchange rate policy because there is no domestic currency to exchange. The countries in the monetary union have the same currency, so there is no need for a fixed exchange rate between the domestic and foreign currencies. This arrangement can promote trade and investment among the member countries, but it requires a high degree of economic integration and policy coordination. It is not the same as a currency board arrangement because it does not involve a commitment to exchange the domestic currency for a foreign currency at a fixed rate.

CFA Level 1, Topic 2 - Economics, Learning Module 7 - Capital Flows and the FX Market, LOS 7b: Describe exchange rate regimes and explain the effects of exchange rates on countries' international trade and capital flows.

Q.23 In a scenario where monetary policy is tight and fiscal policy is easy, what is the expected impact on the composition of aggregate demand?

- A. Higher private sector demand and lower public sector demand.
- B. Lower private sector demand and higher public sector demand.
- C. Both private and public sector demand will decrease

There will be lower private sector demand and higher public sector demand. This is due to the effects of tight monetary policy and easy fiscal policy. Tight monetary policy typically involves high interest rates, which can deter private sector demand. This is because higher interest rates make borrowing more expensive, which can discourage businesses from taking out loans to finance their operations or expansion. As a result, private sector demand may decrease.

On the other hand, easy fiscal policy usually involves increased government spending or lower taxes. This can stimulate public sector demand. For instance, increased government spending can lead to more public sector projects, which can increase demand in the public sector. Similarly, lower taxes can leave consumers with more disposable income, which can also stimulate demand. Therefore, in a scenario where monetary policy is tight and fiscal policy is easy, we can expect lower private sector demand and higher public sector demand.

A is incorrect. This option suggests that there will be higher private sector demand and lower public sector demand. However, as explained above, tight monetary policy can deter private sector demand due to higher borrowing costs. Similarly, easy fiscal policy can stimulate public sector demand through increased government spending or lower taxes.

C is incorrect. This option suggests that both private and public sector demand will decrease. However, while tight monetary policy can decrease private sector demand, easy fiscal policy can actually increase public sector demand. Therefore, this option does not accurately reflect the effects of tight monetary policy and easy fiscal policy. Instead, we can expect a shift in the composition of aggregate demand, with lower private sector demand and higher public sector demand.

Level 1, Topic 2, Economics, Learning Module 4: Monetary Policy LOS 4e: explain the interaction of monetary and fiscal policy.

Q.24 If the income effect dominates the substitution effect, the impact of higher interest rates on the level of savings is *most likely*:

- A. Neutral.
- B. Positive.
- C. Negative.

When the income effect dominates the substitution effect, higher interest rates imply that fewer savings are needed to achieve a certain amount of money for the future. This leads individuals to substitute present consumption for future consumption. In this scenario, it is plausible to observe that higher interest rates result in lower savings. The income effect refers to the change in consumption resulting from a change in real income. Here, higher interest rates increase the real income of individuals, as they can earn more from their savings. However, if the income effect is dominant, individuals may perceive that they need to save less to achieve their future financial goals, leading to a decrease in the level of savings.

Option A is incorrect. With higher interest rates, individuals feel wealthier and believe they need to save less to reach their future financial goals. Therefore, they substitute present consumption for future consumption, leading to a decrease in savings.

Option B is incorrect. The substitution effect refers to the change in consumption patterns due to a change in the relative prices of goods. However, in this case, the income effect, which refers to the change in consumption due to a change in real income, is dominant.

CFA Level 1, Topic 2, Reading 8 - Topics in Demand and Supply Analysis, LOS 8b: compare substitution and income effects.

Q.25 Which of the following equations represents the fiscal balance?

- A. Government spending - Taxes
- B. Export - Imports
- C. Consumption + Savings + Taxes

The fiscal balance is represented by the equation: Government spending - Taxes. This equation is a fundamental concept in public finance and is used to measure the difference between the government's expenditures and its revenues (excluding the money it borrowed). If the government spends more than it collects in taxes, it runs a fiscal deficit. If it collects more than it spends, it has a fiscal surplus.

B is incorrect. The equation Export - Imports represents the trade balance, not the fiscal balance. The trade balance is the difference between the value of a country's exports and its imports. If a country exports more than it imports, it has a trade surplus. If it imports more than it exports, it has a trade deficit. While the trade balance can impact the fiscal balance (for example, a trade deficit can lead to a fiscal deficit if the government borrows to finance the trade deficit), it is not the same as the fiscal balance.

C is incorrect. The equation Consumption + Savings + Taxes does not represent the fiscal balance. This equation is more closely related to the concept of national income accounting, which is a method used to measure the economic activity of a nation. While taxes are a component of the fiscal balance, consumption and savings are not directly related to the fiscal balance. Therefore, this option is incorrect because it does not accurately represent the concept of fiscal balance.

CFA Level 1, Topic 2 - Economics, Learning Module 3 - Fiscal Policy, LOS 3c: Describe tools of fiscal policy, including their advantages and disadvantages.

Q.26 All else being equal, if the Australian dollar goes from USD 0.8 to USD 0.9, goods produced in Australia and consumed in the United States will usually be:

- A. cheaper for Americans.
- B. more expensive for Americans.
- C. the same price as before for Americans.

The value of the Australian dollar has increased relative to the US dollar. This means that it now takes more US dollars to purchase the same amount of Australian dollars. In the context of purchasing goods produced in Australia, this translates to a higher cost for Americans. Previously, with the exchange rate at USD 0.8, an item costing AUD 1 would cost an American USD 0.8. Now, with the exchange rate at USD 0.9, the same item would cost an American USD 0.9. This represents an increase in cost, making goods produced in Australia more expensive for Americans.

A is incorrect. This option suggests that goods produced in Australia would become cheaper for Americans. However, this would only be the case if the Australian dollar had depreciated relative to the US dollar. In this scenario, the Australian dollar has appreciated, meaning it takes more US dollars to purchase the same amount of Australian dollars. Therefore, goods produced in Australia become more expensive, not cheaper, for Americans.

C is incorrect. This option suggests that the price of goods produced in Australia would remain the same for Americans. However, this would only be the case if the exchange rate between the Australian dollar and the US dollar had remained constant. In this scenario, the exchange rate has increased, meaning it takes more US dollars to purchase the same amount of Australian dollars. Therefore, goods produced in Australia become more expensive, not the same price, for Americans.

CFA Level 1, Topic 2 - Economics, Learning Module 1 - Firms and Market Structures, LOS 1b: Describe characteristics of perfect competition, monopolistic competition, oligopoly, and pure monopoly.

Q.27 In Barbados, foreigners are not generally permitted to own land. Although there are many exceptions made, the more obvious being the presence of major hotels from the USA and other countries dotting the beachfront, these restrictions are classified as:

- A. Import quotas.
- B. Capital restrictions.
- C. Domestic content provisions.

Capital restrictions are measures that limit the ability of foreigners to own domestic assets, or conversely, limit the ability of citizens to own foreign assets. In the context of the question, the restrictions in Barbados that limit the ownership of land by foreigners are a form of capital restriction. These restrictions are put in place to control the flow of capital in and out of the country, and to protect domestic industries and assets from foreign ownership. They can take various forms, including restrictions on land ownership, as is the case in Barbados. These restrictions can have significant implications for foreign investors and businesses, as they limit their ability to invest in and own assets in the country.

A is incorrect. Import quotas are a type of trade restriction that sets a physical limit on the quantity of a good that can be imported during a specific period. They are used to protect domestic producers from foreign competition by limiting the amount of foreign goods that can enter the market. However, they do not have any direct impact on the ownership of land or other assets by foreigners.

C is incorrect. Domestic content provisions are requirements that mandate a certain percentage of a good or service to be produced or sourced domestically. They are typically used to support domestic industries and promote local economic growth. However, they do not restrict the ownership of assets by foreigners. Therefore, the restrictions in Barbados cannot be classified as domestic content provisions. These provisions are more commonly associated with government procurement policies, where they require that goods or services procured using public funds be manufactured or sourced domestically.

CFA Level 1, Topic 2 - Economics, Learning Module 6 - International Trade, LOS 6b: Compare types of trade restrictions, such as tariffs, quotas, and export subsidies, and their economic implications.

Q.28 Which of the following is *most likely* a sell-side participant in the forex market?

- A. Large banks
- B. Individual retail accounts
- C. Privately held companies

Large banks play a crucial role on the sell-side by providing liquidity, facilitating trades, and making prices for various buy-side clients, such as corporations, hedge funds, and retail investors. These banks actively engage in buying and selling currencies, contributing to efficient price discovery in the forex market. Their substantial resources and access to global markets enable them to support trading activity on a large scale, making them essential sell-side participants.

B is incorrect. Individual retail accounts are buy-side participants. They typically trade for investment purposes and rely on the sell-side, including large banks, to provide liquidity and pricing for their trades.

C is incorrect. Privately held companies are usually buy-side participants. They engage in forex transactions mainly to manage currency exposure and mitigate risk rather than to provide liquidity or actively trade on the sell-side.

CFA Level 1, Topic 2, Learning Module 6 - International Trade, LOS 6a: Describe the benefits and costs of international trade.

Q.29 In which of the following perfect competition situations will a firm shut down in the long run?

- A. The average revenue is greater than the average variable cost and the average total cost.
- B. The average revenue is less than the average variable cost but greater than the average total cost.
- C. The average revenue is greater than the average variable cost but less than the average total cost.

In a perfect competition scenario, a firm will shut down in the long run when the average revenue is greater than the average variable cost but less than the average total cost. This is the situation described in option C. The reason for this is that the average revenue being greater than the average variable cost indicates that the firm is able to cover its variable costs, but not its total costs. However, the average revenue being less than the average total cost implies that the firm is not able to cover all its costs, including fixed costs. This means that the firm is operating at a loss. In the long run, a firm cannot sustain operations if it is not able to cover all its costs, and thus it will choose to shut down.

A is incorrect. This option suggests that the average revenue is greater than both the average variable cost and the average total cost. In this scenario, the firm is not only able to cover its variable costs, but also its total costs. This implies that the firm is operating at a profit. A firm operating at a profit has no reason to shut down in the long run. Therefore, this option does not represent a situation in which a firm would shut down.

B is incorrect. This option suggests that the average revenue is less than the average variable cost but greater than the average total cost. This scenario is not possible because the average total cost is always greater than the average variable cost, given that the average total cost includes both variable and fixed costs. Therefore, it is not possible for the average revenue to be less than the average variable cost but greater than the average total cost. This option does not represent a realistic scenario in which a firm would shut down in the long run.

CFA Level 1, Topic 2 - Economics, Learning Module 1 - Firm and market structures, LOS 1a: Determine and interpret breakeven and shutdown points of production, as well as how economies and diseconomies of scale affect costs under perfect and imperfect competition.

Q.30 A fiscal policy may not be able to stabilize aggregate demand completely, *most likely* because:

- I. Relevant data often appears well after a policy decision needs to be made.
- II. There is uncertainty about where the economy will be heading independent of policy changes.
- III. Private sector behavior may change as discretionary fiscal adjustments are announced

A. Only I.

B. I and III.

C. I, II and III.

Statement I is correct. Relevant data often appears well after a policy decision needs to be made. This is a significant challenge in fiscal policy making. Fiscal policy decisions are often based on economic data such as GDP, unemployment rate, inflation rate, etc. However, there is often a lag between the time when this data is collected and when it is available for policy makers. This lag can be several months or even a year. Therefore, policy makers often have to make decisions based on outdated data. This can lead to incorrect policy decisions and can prevent fiscal policy from stabilizing aggregate demand completely.

Statement II is correct. There is uncertainty about where the economy will be heading independent of policy changes. The economy is influenced by a multitude of factors, many of which are beyond the control of policy makers. These factors can include technological changes, demographic changes, changes in global economic conditions, etc. These factors can cause the economy to deviate from its expected path, making it difficult for fiscal policy to stabilize aggregate demand.

Statement III is correct. Private sector behavior may change as discretionary fiscal adjustments are announced. When the government announces a fiscal policy change, it can influence the expectations and behavior of households and businesses. For example, if the government announces a tax increase, households may reduce their consumption in anticipation of the tax increase. Similarly, businesses may reduce their investment in anticipation of the tax increase. These changes in private sector behavior can offset the intended effects of the fiscal policy, making it difficult for the policy to stabilize aggregate demand.

CFA Level 1, Topic 2 - Economics, Learning Module 3 - Fiscal Policy, LOS 3d: Explain the implementation of fiscal policy and the difficulties of implementation as well as whether a fiscal policy is expansionary or contractionary.

Q.31 Which of the following is *most likely* a trade agreement in which barriers on the movement of labor and capital goods among members are removed, but members do not adopt common economic policies?

- A. Monetary union.
- B. Economic union.
- C. Common markets.

The correct answer is option C, Common markets. Common markets are a type of trade agreement where member countries remove all restrictions regarding the import and export of goods and services. They adopt a standard set of trade restrictions for non-members and eliminate barriers to the movement of labor and capital goods among members. This means that goods, services, and factors of production such as labor and capital can move freely among the member countries. However, despite these agreements, the member countries do not adopt common economic policies. This is a key characteristic of common markets and distinguishes them from other types of trade agreements. The member countries retain their individual economic policies and do not coordinate their economic policies at a higher, supranational level.

A, Monetary union, is incorrect. A monetary union is a type of trade agreement where two or more governments agree to share a common currency. This involves a high level of economic integration and coordination among the member countries. The member countries not only remove trade barriers and allow for the free movement of goods, services, and factors of production, but they also coordinate their monetary policies. They use a common currency and have a common central bank that sets monetary policy for all the member countries. This is a higher level of economic integration than a common market, where member countries do not adopt common economic policies.

B, Economic union, is incorrect. An economic union is a type of trade agreement where member countries adopt common economic policies. This involves a high level of economic integration and coordination among the member countries. The member countries not only remove trade barriers and allow for the free movement of goods, services, and factors of production, but they also coordinate their economic policies. They have common policies on issues such as regulating products, capital and labor, and freedom of movement of goods and services. This is a higher level of economic integration than a common market, where member countries do not adopt common economic policies.

CFA Level 1, Topic 2 - Economics, Learning Module 6 - International Traded, LOS 6c: Explain the motivations for and advantages of trading blocs, common markets, and economic unions.

Q.32 An investor is interested in earning a risk-free profit on 100 United Arab Emirates Dirham (DUB). He finds out that the DUB/CAD exchange rate is 0.4, and the futures exchange rate DUB/CAD one year from today is 0.45. Given that the risk-free interest rate in Canada is 5%, and the risk-free rate in the United Arab Emirates is only 2%, the amount of risk-free profit earned in terms of DUB is *closest* to:

- A. 12.500
- B. 16.125
- C. 18.125

First convert the initial investment of 100 DUB into CAD using the current exchange rate of 0.4. This gives us an initial investment of 250 CAD.

Next, we calculate the interest earned on this investment in Canada, where the risk-free interest rate is 5%. This gives us an interest of 12.5 CAD. Adding this to the initial investment, we get a total amount of 262.5 CAD.

This total amount is then converted back into DUB using the futures exchange rate of 0.45, which gives us 118.125 DUB. This is the amount that the investor will have in the future if he invests his money in Canada.

On the other hand, if the investor decides to invest his money in the United Arab Emirates, where the risk-free interest rate is only 2%, he would earn an interest of 2 DUB on his initial investment of 100 DUB. This gives him a total of 102 DUB in the future.

The profit is then calculated by subtracting the initial investment and the interest earned in the United Arab Emirates from the amount that the investor would have in the future if he invests his money in Canada. This gives us a profit of 16.125 DUB.

A is incorrect. This option suggests that the risk-free profit earned in terms of DUB is 12.500. However, this does not take into account the difference in interest rates between Canada and the United Arab Emirates. The investor would earn more interest in Canada due to the higher risk-free interest rate, which would result in a higher profit.

C is incorrect. This option suggests that the risk-free profit earned in terms of DUB is 18.125. However, this is higher than the actual profit calculated. This option seems to overestimate the profit by not correctly accounting for the interest earned in the United Arab Emirates, which is subtracted from the total amount that the investor would have in the future if he invests his money in Canada.

CFA Level 1, Topic 2 - Economics, Learning Module 8 - Exchange rate calculations, LOS 8b: Explain the arbitrage relationship between spot and forward exchange rates and interest rates, calculate a forward rate using points or in percentage terms, and interpret a forward discount or premium.

Q.33 For the last 5 quarters, an analyst has gathered the $\frac{P}{E}$ ratios of a Gem Co., a high-tech firm, as 92, 104, 89, 101, and 97, respectively each quarter. What is the average P/E ratio the trader should note for Gem Co. over these 5 quarters?

A. 86.60

B. 96.28

C. 76.35

Harmonic mean is a method of averaging that is particularly suitable for situations where the price is in the numerator, such as in the price-earnings ratio (P/E). The harmonic mean is calculated as follows: Harmonic mean for Gem Co. shares = $\frac{5}{(\frac{1}{92} + \frac{1}{104} + \frac{1}{89} + \frac{1}{101} + \frac{1}{97})} = 96.28$. The

harmonic mean is preferred over the arithmetic mean in this context because it gives equal weight to each data point. If the arithmetic mean were used instead (a common mistake), higher data points would be given more weight than lower ones, which could skew the results.

A is incorrect. This option suggests that the average P/E ratio for Gem Co. over the last 5 quarters is 86.60. However, this is not the case. The harmonic mean of the given P/E ratios (92, 104, 89, 101, and 97) is 96.28, not 86.60. If the arithmetic mean were used to calculate the average, the result would be closer to this value, but as explained above, the arithmetic mean is not the appropriate method for averaging these data points.

C is incorrect. This option suggests that the average P/E ratio for Gem Co. over the last 5 quarters is 76.35. However, this is not the case. The harmonic mean of the given P/E ratios (92, 104, 89, 101, and 97) is 96.28, not 76.35. If some other method of averaging were used, the result might be closer to this value, but as explained above, the harmonic mean is the appropriate method for averaging these data points.

CFA Level 1, Topic 2 - Quantitative Methods, Learning Module 1 - Rates and Returns, LOS 1b: Calculate and interpret different approaches to return measurement over time and describe their appropriate uses.

Q.34 Which of the following countries would *least likely* be classified as an Autarky?

- A. A country seeking political self-sufficiency with little trade.
- B. A country's state-owned enterprises control strategic industries.
- C. A country with mutually beneficial trade relationships and harmonization.

An Autarky is a country that maintains a state of self-sufficiency, primarily through the implementation of protectionist policies that restrict foreign trade. The country that would least likely be classified as an Autarky is a country with mutually beneficial trade relationships and harmonization, as represented by option C. This is because such a country is open to international trade and cooperation, which is the exact opposite of what an Autarky represents.

A is incorrect. This option describes a country seeking political self-sufficiency with little trade. This is a characteristic of an Autarky. Autarkic countries aim to reduce their dependence on international trade and instead focus on domestic production. They believe that this approach will protect their economies from international market fluctuations and maintain their political sovereignty. An example of such a country is North Korea, which has stringent trade restrictions and pursues policies aimed at self-sufficiency.

B is incorrect. This option describes a country where state-owned enterprises control strategic industries. This is another characteristic of an Autarky. In such countries, the government controls key industries to ensure that the country's economic and strategic interests are protected. This control allows the government to direct resources in a way that supports its self-sufficiency goals. Venezuela is an example of such a country, where the government controls the oil industry, which is the backbone of its economy.

On the other hand, option C describes a country that has mutually beneficial trade relationships and harmonization. This is the opposite of an Autarky. Such a country is open to international trade and often has trade agreements with other countries to facilitate the exchange of goods and services. This openness to trade allows the country to benefit from the comparative advantages of other countries, leading to increased economic efficiency and consumer welfare. Singapore is an example of such a country, known for its open economy and extensive trade relationships.

Level 1, Topic 2 - Economics, Learning Module 5 - Introduction to Geopolitics, LOS 5d: Describe geopolitical risk.

Q.35 TTurks Printers is a printer retailer that sells printers to large corporations as per the below data;

Beginning Inventory	50 Printers at \$100 each
Purchased on January 1st	100 Printers at \$110 each
Purchased on March 1st	20 Printers at \$130 each

Assuming that Turks uses the FIFO inventory method, the cost of goods sold (COGS) if Turks sell 130 printers to Hyper Corp. in April is *closest to*;

- A. \$13,000
- B. \$13,800
- C. \$14,600

The First-In, First-Out (FIFO) method of inventory valuation is a cost flow assumption that the first goods purchased are also the first goods sold. In other words, the costs of the oldest products in inventory are assigned to cost of goods sold (COGS) first. Turks Printers sold 130 printers in April. According to the FIFO method, the first 50 printers sold would be valued at the cost of the beginning inventory, which is \$100 each. The next 80 printers sold would be valued at the cost of the printers purchased on January 1st, which is \$110 each. The cost of the printers purchased on March 1st is not considered in this calculation because, according to the FIFO method, these printers have not been sold yet.

A is incorrect. This option suggests that the COGS is \$13,000. However, this does not correctly apply the FIFO method. If we were to consider this amount, it would mean that all 130 printers sold were valued at less than \$100 each. This is not the case as per the data provided. The first 50 printers sold were valued at \$100 each and the next 80 printers were valued at \$110 each. Therefore, the COGS should be higher than \$13,000.

C is incorrect. This option suggests that the COGS is \$14,600. This would mean that the 130 printers sold were valued at more than \$110 each on average. However, according to the FIFO method and the data provided, the first 50 printers sold were valued at \$100 each and the next 80 printers were valued at \$110 each. The printers purchased on March 1st at \$130 each have not been sold yet. Therefore, the COGS should be less than \$14,600.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 6 - Analysis of Inventories, LOS 6b: Calculate and explain how inflation and deflation of inventory costs affect the financial statements and ratios of companies that use different inventory valuation methods.

Q.36 Elonn's Cars produces financial statements in compliance with International Financial Reporting Standards (IFRS). Inventory was bought for \$5 million and written down to \$600,000. However, one of the cars was later found to be a valuable collectible, and the inventory is now thought to be worth \$7 million. On the balance sheet, inventory is *most likely* reported at:

- A. \$2,000,000
- B. \$5,000,000
- C. \$7,000,000

Under International Financial Reporting Standards (IFRS), the inventory of Elonn's Cars is most likely reported at \$5,000,000 on the balance sheet. This is because IFRS allows for the reversal of write-downs when the net realizable value of the inventory increases. In this case, the inventory was initially bought for \$5 million and then written down to \$600,000. However, the discovery of a valuable collectible car in the inventory increased its value to \$7 million. Despite this increase, the inventory is reported at the lower of cost or net realizable value, which in this case is the original cost of \$5 million.

A is incorrect. The inventory cannot be reported at \$2,000,000 because this value is neither the original cost of the inventory nor its net realizable value. The IFRS requires that inventory be reported at the lower of cost or net realizable value. In this case, the cost is \$5 million and the net realizable value is \$7 million, so the inventory should be reported at \$5 million, not \$2 million.

C is incorrect. Although the net realizable value of the inventory increased to \$7 million after the discovery of a valuable collectible car, the inventory cannot be reported at this value. This is because IFRS requires that inventory be reported at the lower of cost or net realizable value. In this case, the cost of the inventory is lower than its net realizable value, so the inventory should be reported at \$5 million, not \$7 million.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 6 - Analysis of Inventories, LOS 6a: Describe the measurement of inventory at the lower of cost and net realisable value and its implications for financial statements and ratios.

Q.37 A small manufacturing firm adhering to US GAAP reported the following:

Net Income	\$600,000
Non-cash Charges	\$25,000
Interest Expense	\$30,000
Capital Expenditures	\$21,000
Tax Rate	20%

The company's free cash flow to the firm (FCFF) is *closest to*:

- A. \$604,000.
- B. \$628,000.

C. \$634,000.

$$\text{FCFF} = \text{NI} + \text{NCC} + \text{Int}(1 - t) - \text{FCInv} - \text{WCInv}$$

Where: NI = Net income. NCC = Non-cash charges (such as depreciation and amortization).
Int = Interest expense. FCInv = Capital expenditures (fixed capital, such as equipment).
WCInv = Working capital expenditures. In this case we have:

$$\text{FCFF} = \$600,000 + \$25,000 + \$30,000(1 - 20\%) - \$21,000 - 0 = 628,000$$

A is incorrect. Subtracts the interest expense:

$$\text{FCFF} = \$600,000 + \$25,000 - \$30,000(1 - 20\%) - \$21,000 - 0 = 604,000$$

C is incorrect. It does not consider tax the in the interest expense.

$$\text{FCFF} = \$600,000 + \$25,000 + \$30,000 - \$21,000 - 0 = 634,000$$

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 5 - Analyzing Statement of Cashflows 2, LOS 5b: Calculate and interpret free cash flow to the firm, free cash flow to equity, and performance and coverage cash flow ratios.

Q.38 BrightStar Corporation (BSC), a retail company, acquires inventory throughout the year to sell. At the beginning of 20X3, BSC had no inventory in stock. During 20X3, BSC made the following inventory purchases:

Quarter	Units	Cost per Unit
First quarter	3,000	USD 25
Second quarter	2,500	USD 28
Third quarter	3,500	USD 30
Fourth quarter	4,000	USD 32

Throughout the year, BSC sold 10,000 units at USD 40 each, receiving payment in cash. BSC determined that 3,000 units of inventory were left over, with 2,000 units specifically identified as being bought in the fourth quarter and 1,000 units acquired in the third quarter. The gross profit for BSC in 20X3, assuming no product returns is *closest to*:

A. USD 116,000

B. USD 284,000

C. USD 516,000

We need to calculate the gross profit for BrightStar Corporation (BSC) in 20X3. Gross profit is calculated as Revenue minus Cost of Goods Sold (COGS).

First, we calculate the Revenue. The Revenue is calculated as the number of units sold multiplied by the selling price per unit. In this case, BSC sold 10,000 units at USD 40 each, so the Revenue is $10,000 \text{ units} \times \text{USD } 40 = \text{USD } 400,000$.

Next, we calculate the COGS. The COGS is calculated as the sum of the cost of units sold from each quarter. From the first quarter, 3,000 units were sold at USD 25 each, so the cost is $3,000 \text{ units} \times \text{USD } 25 = \text{USD } 75,000$. From the second quarter, 2,500 units were sold at USD 28 each, so the cost is $2,500 \text{ units} \times \text{USD } 28 = \text{USD } 70,000$. From the third quarter, only 2,500 units were sold (as 1,000 units are left in inventory) at USD 30 each, so the cost is $2,500 \text{ units} \times \text{USD } 30 = \text{USD } 75,000$. From the fourth quarter, only 2,000 units were sold (as 2,000 units are left in inventory) at USD 32 each, so the cost is $2,000 \text{ units} \times \text{USD } 32 = \text{USD } 64,000$. The total COGS is $\text{USD } 75,000 + \text{USD } 70,000 + \text{USD } 75,000 + \text{USD } 64,000 = \text{USD } 284,000$.

Finally, we calculate the Gross Profit as $\text{Revenue} - \text{COGS} = \text{USD } 400,000 - \text{USD } 284,000 = \text{USD } 116,000$.

B is incorrect. The gross profit is not USD 284,000. This is the total COGS, not the gross profit. The gross profit is calculated as Revenue minus COGS, not just the COGS alone. Therefore, option B is incorrect.

C is incorrect. The gross profit is not USD 516,000. This value is significantly higher than the calculated gross profit of USD 116,000. It seems like this option might have been calculated by adding the Revenue and the COGS, but this is not how gross profit is calculated. Gross profit is calculated as Revenue minus COGS, not Revenue plus COGS. Therefore, option C is incorrect.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 2 - Analyzing Income Statements,

Q.39 Which of the following may be considered a warning sign indicating manipulation of financial statements by an analyst?

- I. Excessive non-recurring costs classified in the income statement.
 - II. Net profit of 2% in the first three quarters, followed by net profit of 17% in the 4th quarter.
 - III. The number of days of sales outstanding was 15 days. The corresponding figure for the industry was 75 days. The company is engaged in providing engineering consultancy services. The customers generally pay after the company's design has been approved by the customer's construction team, which takes roughly 2-3 months.
- A. III.
- B. I and II.
- C. I, II and III.

Each of these scenarios can be a warning sign of financial statement manipulation. Analysts should pay close attention to various aspects of a company's financial statements, including revenue, inventories, capitalization policies, deferred costs, and the relationship between cash flow and net income. Other potential warning signs may include a significant difference between the depreciation method and estimated useful life of the company, fourth-quarter surprises, and one-time sales included in revenue. By considering all these factors, analysts can more accurately assess the financial health and performance of a company.

A is incorrect. While the third scenario could be a warning sign of financial statement manipulation, it does not cover all potential warning signs. The number of days of sales outstanding being significantly lower than the industry standard could indicate that the company is recognizing revenue prematurely or aggressively, which can distort the true financial performance and position of the company. However, this alone does not account for other potential manipulations such as excessive non-recurring costs or sudden jumps in net profit.

B is incorrect. Although it includes the first two scenarios, it does not consider the third scenario. Excessive non-recurring costs classified in the income statement can distort the company's recurring profitability. A sudden jump in net profit in the 4th quarter can also be a red flag, as it may indicate that the company is manipulating its earnings to meet annual targets. However, these two scenarios do not cover all potential manipulations. The number of days of sales outstanding being significantly lower than the industry standard is also a potential warning sign that is not considered in this option.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 10 - Financial Reporting Quality, LOS 10h: Describe accounting warning signs and methods for detecting manipulation of information in financial reports.

Q.40 The following are the details of a firm's long-lived asset: Carrying value: \$30,000 Undiscounted future cash flows: \$31,000 Discounted future cash flows: \$29,000 Fair value less selling cost: \$28,000 How would the company report the value of this asset under IFRS as well as under US GAAP?

A. Under IFRS: \$29,000; Under US GAAP: \$28,000.

B. Under IFRS: \$30,000; Under US GAAP: \$30,000.

C. Under IFRS: Reduce the value to \$29,000 and record an impairment of \$1,000 as an expense; Under US GAAP: \$30,000.

Under International Financial Reporting Standards (IFRS), an asset is considered impaired when its carrying value exceeds the amount to be recovered through use or sale of the asset. In this case, the carrying value of the asset is \$30,000, while the discounted future cash flows (which represent the recoverable amount) are \$29,000. This indicates that the asset is indeed impaired under IFRS. The company would need to reduce the carrying value of the asset to the recoverable amount, which is \$29,000, and record an impairment loss of \$1,000 as an expense. This is in line with the IFRS requirement to recognize an impairment loss when the carrying amount of an asset exceeds its recoverable amount.

A is incorrect. Under IFRS, the asset would indeed be reported at \$29,000 due to the impairment loss. However, under US GAAP, the asset would not be impaired and would continue to be reported at its carrying value of \$30,000. This is because under US GAAP, an asset is considered impaired only if the undiscounted future cash flows are less than the carrying value. In this case, the undiscounted future cash flows are \$31,000, which is greater than the carrying value of \$30,000.

B is incorrect. As explained earlier, under IFRS, the asset would be impaired and its carrying value would need to be reduced to the recoverable amount of \$29,000.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 7 - Analysis of Long Term Assets, LOS 7b: explain and evaluate how impairment and derecognition of property, plant, and equipment, and intangible assets affect the financial statements and ratios.

Q.41 The following data had been taken from Diamond Limited's financial statements:

Revenue	\$600,000
Cash sales	40% of credit sales
Average trade receivables	\$60,000

If the number of days in a year is to be assumed as 360, the approximate days of sales outstanding (DSO) is *closest to*?

- A. 36
- B. 50
- C. 60

The question provides us with the following data: Revenue = \$600,000, Cash Sales = 40% of Credit Sales, and Average Trade Receivables = \$60,000. We are asked to calculate the Days of Sales Outstanding (DSO), assuming a 360-day year. The DSO is a measure of the average number of days that a company takes to collect revenue after a sale has been made, and it is calculated as $(\text{Average Trade Receivables} / \text{Credit Sales}) \times \text{Number of Days in Period}$.

First, we need to determine the value of Credit Sales. Given that Cash Sales are 40% of Credit Sales, we can express Cash Sales as $0.40 \times \text{Credit Sales}$. Let's denote Credit Sales as X. Therefore, Cash Sales = $0.40X$. Since the total Revenue is the sum of Cash Sales and Credit Sales, we can set up the equation: $\text{Revenue} = 0.40X + X = \$600,000$. Simplifying this equation, we get $1.40X = \$600,000$. Solving for X, we find that Credit Sales (X) = $\$600,000 / 1.40 = \$428,571.43$.

Now that we have the value of Credit Sales, we can substitute it into the DSO formula along with the given Average Trade Receivables and the number of days in a year. Thus, $\text{DSO} = (\text{Average Trade Receivables} / \text{Credit Sales}) \times \text{Number of Days in Period} = (\$60,000 / \$428,571.43) \times 360$. Calculating the ratio of Average Trade Receivables to Credit Sales, we get approximately 0.14. Multiplying this by 360, we find that $\text{DSO} = 0.14 \times 360 = 50.42$.

A is incorrect. If we chose 36 as the DSO, it would imply that the company collects its receivables faster than it actually does. This would underestimate the amount of time the company's capital is tied up in receivables, potentially leading to inaccurate financial planning and analysis.

C is incorrect. A DSO of 60 would overestimate the time it takes for the company to collect its receivables. This could lead to overestimation of the company's liquidity risk and could negatively impact decision-making related to cash flow management and credit policies.

CFA Level 1, Topic 3- Financial Statement Analysis, Learning Module 11 - Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.42 Twix Chemicals is a company involved in manufacturing active pharmaceutical ingredients. The firm has a storage tank for methanol, that is transferred to the production floor through a pipe. Management believes that last-in, first-out (LIFO) is a better method for valuing the inventory of methanol. Under which of the following situations can methanol be valued using the last-in, first-out (LIFO) method?

- A. In all cases.
- B. If the company reports under IFRS.
- C. If the company reports under US GAAP.

Methanol can be valued using the last-in, first-out (LIFO) method if the company reports under US GAAP. The reason for this is that the International Financial Reporting Standards (IFRS) strictly prohibit the use of the LIFO method for inventory valuation. This is because the IFRS believes that the LIFO method can distort the actual financial position of a company, as it does not reflect the current market value of the inventory. Instead, it reflects the cost of the oldest inventory, which may be significantly different from the current market value. This can lead to a misrepresentation of the company's financial health, which can mislead investors and other stakeholders. Therefore, companies that report under IFRS are not allowed to use the LIFO method for inventory valuation.

A is incorrect. This option suggests that the LIFO method can be used in all cases for valuing the inventory of methanol. However, this is not accurate. As mentioned earlier, the use of the LIFO method is strictly prohibited under IFRS. Therefore, it cannot be used in all cases. Companies that report under IFRS must use other methods for inventory valuation, such as the first-in, first-out (FIFO) method or the weighted average cost method. These methods are considered to provide a more accurate representation of the company's financial position, as they reflect the current market value of the inventory.

B is incorrect. This option suggests that methanol can be valued using the LIFO method if the company reports under IFRS. However, as explained earlier, the use of the LIFO method is strictly prohibited under IFRS. Therefore, companies that report under IFRS cannot use the LIFO method for inventory valuation. Instead, they must use other methods, such as the FIFO method or the weighted average cost method, which are considered to provide a more accurate representation of the company's financial position.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 6 - Analysis of Inventories, LOS 6b: Calculate and explain how inflation and deflation of inventory costs affect the financial statements and ratios of companies that use different inventory valuation methods.

Q.43 The changes in deferred taxes for a company, due to a change in tax rate from 45% to 35% in a specific jurisdiction, are provided in the following table:

Change in deferred tax liabilities (DTL)	\$14,000
Change in deferred tax assets (DTA)	\$3,500
Tax payable	\$15,000
Pretax income	\$100,000

Given the information, the effective tax rate for the firm is closest to

- A. 10.50%
- B. 25.50%
- C. 32.50%

The effective tax rate is calculated by dividing the income tax expense by the pretax income. The formula is:

$$\text{Effective Tax Rate} = \frac{\text{Income Tax Expense}}{\text{Pretax Income}}$$

In this case, the income tax expense is the sum of the tax payable and the change in deferred tax liabilities (DTL), minus the change in deferred tax assets (DTA). The given values are:

- Tax payable = \$15,000
- Change in DTL = \$14,000
- Change in DTA = \$3,500

Therefore, the income tax expense is calculated as:

$$\text{Income Tax Expense} = 15,000 + 14,000 - 3,500 = 25,500$$

The pretax income is \$100,000, so the effective tax rate is:

$$\text{Effective Tax Rate} = \frac{25,500}{100,000} = 0.255 = 25.5\%$$

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 9 - Analysis of Income Taxes, LOS 9d: Analyze disclosures relating to deferred tax items and the effective tax rate reconciliation and explain how information included in these disclosures affects a company's financial statements and financial ratios.

Q.44 Under which of the following economic conditions would the FIFO method's inventory value *most likely* exceed the inventory value of the LIFO method?

- A. Stagnation.
- B. Rising prices.
- C. Declining prices.

The FIFO (First-In, First-Out) method of inventory valuation assumes that the first goods purchased or produced are the first ones to be sold. Therefore, in a period of rising prices, the cost of the older inventory, which is sold first according to FIFO, would be lower than the cost of the newer inventory. This results in a higher inventory value under the FIFO method as compared to the LIFO (Last-In, First-Out) method. The LIFO method assumes that the last goods purchased or produced are the first ones to be sold. Therefore, in a period of rising prices, the cost of the newer inventory, which is sold first according to LIFO, would be higher than the cost of the older inventory. This results in a lower inventory value under the LIFO method as compared to the FIFO method.

A is incorrect. In the case of stagnation, where prices remain constant, the inventory value under both the FIFO and LIFO methods would be the same. This is because the cost of the older and newer inventory would be the same, regardless of whether the FIFO or LIFO method is used. Therefore, the inventory value would not differ between the two methods. This makes option A incorrect as the question asks for a situation where the FIFO method's inventory value would most likely exceed the inventory value of the LIFO method.

C is incorrect. In the case of declining prices, the FIFO method would result in a lower inventory value as compared to the LIFO method. This is because under the FIFO method, the older inventory, which has a higher cost, is sold first. Therefore, the remaining inventory, which has a lower cost due to declining prices, results in a lower inventory value. On the other hand, under the LIFO method, the newer inventory, which has a lower cost, is sold first. Therefore, the remaining inventory, which has a higher cost, results in a higher inventory value. This makes option C incorrect as the question asks for a situation where the FIFO method's inventory value would most likely exceed the inventory value of the LIFO method.

CFA Level 1, Topic 3 - Financial Statement analysis, Learning Module 6 -Analysis of Inventories, LOS 6b: Calculate and explain how inflation and deflation of inventory costs affect the financial statements and ratios of companies that use different inventory valuation methods.

Q.45 Baku Mart, a chain of hypermarkets, reported a net income of \$400,000 and paid cash dividends of \$260,000 to preferred stockholders for 2016. At the beginning of 2016, Baku had 8,000 shares of common stock outstanding, but the firm issued 3,000 new shares on November 1st, 2016. Given this information, the basic EPS of Baku Mart is *closest to*:

- A. \$8.26
- B. \$16.47
- C. \$22.00

The basic Earnings Per Share (EPS) is the net income minus the preferred dividends, divided by the weighted average shares of common stock. In this case, the net income is \$400,000 and the preferred dividends are \$260,000. The weighted average shares of common stock is calculated by taking the total number of shares at the beginning of the year, multiplying it by the number of months those shares were outstanding, then adding the product of the number of new shares and the number of months those shares were outstanding. This total is then divided by the total number of months in the year. For Baku Mart, this calculation is as follows:

Weighted average shares of common stock = $[(8,000 \text{ shares} * 12 \text{ months}) + (3,000 \text{ shares} * 2 \text{ months})] / 12 \text{ months} = 8,500 \text{ shares}$

Using these values in the basic EPS formula gives:

Basic EPS = $(\$400,000 - \$260,000) / 8,500 \text{ shares} = \16.47

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 2 - Analyzing Income Statements, LOS 2d: Describe how earnings per share is calculated and calculate and interpret a company's basic and diluted earnings per share for companies with simple and complex capital structures including those with antidilutive securities.

Q.46 Armen Inc. and Bristol Corp. are market leaders in the construction industry. Some financial information regarding the two firms is given in the following table:

	Armen Inc.	Bristol Corp.
Revenue	6,000,000	8,000,000
Gross profit	3,400,000	5,500,000
EBIT	2,100,000	2,700,000
Net income	1,500,000	1,800,000
Total debt	6,400,000	7,200,000
Dividend per share	1	2
Share price	25	22
Number of shares outstanding	500,000	600,000

Assuming that each firm's market capitalization is approximately equal to the firm's total equity, Armen Inc.'s return on equity ratio is *closest to*:

- A. 12.0%
- B. 13.6%
- C. 25.6%

The return on equity (ROE) ratio is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity. The formula for ROE is Net Income/Shareholder's Equity. In this case, the net income of Armen Inc. is given as \$1.5 million. The shareholder's equity is not directly given, but it is stated that the market capitalization is approximately equal to the firm's total equity. Market capitalization can be calculated as the share price multiplied by the number of shares outstanding. For Armen Inc., this would be $\$25 * 500,000 = \12.5 million. Therefore, the ROE for Armen Inc. would be $\$1.5 \text{ million} / \$12.5 \text{ million} = 0.12$ or 12%.

A is incorrect. This option suggests that the ROE for Armen Inc. is 12.0%. However, this would imply that the net income is \$1.5 million and the shareholder's equity is \$12.5 million. While the net income is correct, the shareholder's equity is not. As explained above, the shareholder's equity for Armen Inc. is calculated as the share price multiplied by the number of shares outstanding, which equals \$12.5 million. Therefore, the ROE is not 12.0% but 12%.

B is incorrect. This option suggests that the ROE for Armen Inc. is 13.6%. However, this would imply that the net income is \$1.5 million and the shareholder's equity is approximately \$11.03 million. This is not correct as the shareholder's equity for Armen Inc. is calculated as the share price multiplied by the number of shares outstanding, which equals \$12.5 million. Therefore, the ROE is not 13.6% but 12%.

CFA Level 1, Topic 3- Financial Statement Analysis, Learning Module 11 - Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.47 At the beginning of the year, Black Jet Co. purchased a 5-year 7.5% bond at the par value of \$1,000. Due to an increase in interest rates, the value of the bond has decreased by \$135. If Black Jet recognized the bond as available-for-sale security and reported under US GAAP, the value of the bond would be reported is *closest to*:

- A. \$75
- B. \$135
- C. \$865

Under US GAAP, financial assets that are recognized as available-for-sale securities are reported at their fair value. In this case, Black Jet Co. purchased a 5-year 7.5% bond at the par value of \$1,000. However, due to an increase in interest rates, the value of the bond has decreased by \$135. This decrease in value is a reflection of the inverse relationship between bond prices and interest rates. When interest rates rise, bond prices fall, and vice versa. This is because as interest rates increase, newer bonds come to market paying higher coupon rates, making the older, lower-yielding bonds less attractive unless they decrease in price. Therefore, the fair value of the bond is now \$865 (\$1,000 - \$135). This is the value at which the bond would be reported if Black Jet recognized the bond as an available-for-sale security under US GAAP.

A is incorrect. The value of \$75 seems to be derived from the bond's annual interest payment (7.5% of \$1,000). However, this is not the correct answer because the question is asking for the value at which the bond would be reported, not the interest income from the bond. The bond's interest income is a separate item that would be recognized in the income statement, not the balance sheet where the bond's value would be reported.

B is incorrect. The value of \$135 is the amount by which the bond's value has decreased due to the increase in interest rates. However, this is not the correct answer because the question is asking for the value at which the bond would be reported, not the amount of the decrease in the bond's value. The decrease in the bond's value would be reported through other comprehensive income, not the balance sheet where the bond's value would be reported.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 3 - Analyzing Balance Sheets, LOS 3c: Explain the financial reporting and disclosures related to financial instruments.

Q.48 Which of the following accounting activities will LEAST likely result in a deferred tax liability?

- A. Taxes payable are lower than income tax expense.
- B. An asset's tax base is lower than its carrying value.
- C. A firm expenses software development costs on its income statement but capitalizes software development costs for tax purposes.

A firm expenses software development costs on its income statement but capitalizes software development costs for tax purposes. This is because when a firm expenses the costs on its income statement, the pretax income will be lower than the taxable income for tax purposes where the software development cost is not expensed but capitalized. This results in a situation where the taxable income is greater than the pretax income, leading to the creation of a deferred tax asset. A deferred tax asset is an item on the balance sheet that reduces the future tax liability of a company because it can be used to offset future tax obligations.

A is incorrect. This option suggests that taxes payable are lower than income tax expense. This situation would actually result in a deferred tax liability, not a deferred tax asset. A deferred tax liability is a tax that is assessed or is due for the current period but has not yet been paid. The deferral comes from the difference in timing between when the tax is accrued and when the tax is paid. A deferred tax liability can result from differences in depreciation methods used for tax and accounting purposes, installment sale profits, and unrealized profits in inventory, among other things.

B is incorrect. This option suggests that an asset's tax base is lower than its carrying value. This situation would also result in a deferred tax liability. The tax base of an asset is the amount that will be deductible against economic benefits from recovering the carrying amount of the asset. If the carrying amount of the asset exceeds its tax base, the amount of taxable economic benefits will exceed the amount that will be deductible against these taxable economic benefits. This difference results in a taxable temporary difference and leads to a deferred tax liability.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 9 - Analysis of Income Taxes, LOS 9b: Explain how deferred tax liabilities and assets are created and the factors that determine how a company's deferred tax liabilities and assets should be treated for the purposes of financial analysis.

Q.49 Quick Fit is a chain of fitness centers across Malta that does not comply with generally accepted financial reporting standards from that jurisdiction. Still, it claims to follow the Accepted Accounting Principles of Turkey. Due to the inefficiency and ignorance of the government, it is standard practice in Malta not to adhere to local reporting standards. However, the firm is consistently profitable as it has a monopoly in many remote areas of Malta. The firm has consistently earned profit margins of 8% over the last 15 years. Based on the provided assumptions, which of the following *most accurately* describes the quality of financial reporting and the quality of earnings of Quick Fit?

- A. Low financial reporting quality and low quality of earnings.
- B. High financial reporting quality and low quality of earnings.
- C. Low financial reporting quality and indeterminate quality of earnings.

Option C accurately describes the situation of Quick Fit. The company does not comply with the generally accepted financial reporting standards of Malta, its jurisdiction. Instead, it follows the Accepted Accounting Principles of Turkey. This deviation from the local standards indicates a low quality of financial reporting. The quality of financial reporting is determined by how well a company adheres to the accepted accounting principles of its jurisdiction. In this case, Quick Fit's adherence to a different set of principles does not improve its reporting quality. This is because the principles it follows are not recognized or accepted in its jurisdiction, which could lead to misinterpretation or misunderstanding of its financial reports.

A is incorrect. While the first part of this statement is true, the second part is not. Quick Fit has been consistently profitable over the last 15 years, with profit margins of 8%. This indicates a high quality of earnings. However, the quality of these earnings cannot be determined with certainty due to the low quality of financial reporting. The company's deviation from local reporting standards could potentially lead to falsified or inaccurate reporting, making the quality of earnings indeterminate.

B is incorrect. As mentioned earlier, the company does not adhere to the generally accepted accounting principles of its jurisdiction, indicating a low quality of financial reporting. The second part of this statement, suggesting low quality of earnings, is also incorrect. Quick Fit has demonstrated high earnings over the past 15 years. However, due to the low quality of financial reporting, the quality of these earnings is indeterminate.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 10 - Financial Reporting Quality, LOS 10a: Compare financial reporting quality with quality of reported results (including quality of earnings, cash flow, and balance sheet items).

Q.50 A research analyst at Shark Investment Management is conducting a DuPont analysis for a firm whose financial data for the year 2016 is provided in the following table:

Revenue	1,450,000
COGS	550,000
Gross Profit	900,000
SG&A	160,000
Wages Exp.	140,000
EBITDA	600,000
Dep. Exp.	220,000
Operating Profit	380,000
Interest Payment	170,000
EBT	210,000
Taxes	63,000
Net Income	147,000
Total Assets	3,400,000
Total Debt	1,500,000

Considering that the data provided is accurate, the firm's tax burden is *closest to*:

- A. 0.3
- B. 0.7
- C. 0.11

The tax burden is calculated by dividing the Net Income by the Earnings Before Tax (EBT). The formula for the tax burden is:

$$\text{Tax Burden} = \frac{\text{Net Income}}{\text{EBT}}$$

In this case:

- Net Income = \\$147,000
- EBT = \\$210,000

Substituting the given values into the formula:

$$\text{Tax Burden} = \frac{147,000}{210,000} \approx 0.7$$

This means that for every dollar of Earnings Before Tax (EBT), the firm retains \$0.70 after taxes. A tax burden of 0.7 indicates that 70% of the firm's EBT is retained as Net Income, which can significantly impact profitability and cash flow. This is an important factor for a research analyst to consider when conducting a DuPont analysis to assess the firm's financial performance.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning module 11 - Financial Analysis Techniques, LOS 11d: Demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components.

Q.51 ABC Corp reported a net income of \$3 million for 2018. There are currently 2 million shares outstanding, and upper management holds 200,000 share options, which are likely to be exercised. The ABC Corp's diluted EPS is *closest to*:

A. \$1.36

B. \$1.50

C. \$1.67

$$\begin{aligned}\text{Diluted EPS} &= \frac{\text{Net income}}{(\text{Weighted average number of shares outstanding} + \text{New common shares that would be issued})} \\ &= \frac{\$3,000,000}{(2,000,000 + 200,000)} \\ &= \$1.36\end{aligned}$$

B is incorrect. Uses the outstanding share only:

$$= \frac{\$3,000,000}{2,000,000} = \$1.5$$

C is incorrect. Subtracts the option shares from the outstanding shares in the denominator:

$$= \frac{\$3,000,000}{(2,000,000 - 200,000)} = \$1.67$$

. This calculation takes into account the potential dilution of shares that could occur if all the share options held by upper management were exercised. By including these potential new shares in the denominator of the formula, we get a more conservative estimate of the company's earnings per share, which is a key metric for investors.

B is incorrect. This option calculates the EPS as \$1.50 by dividing the net income of \$3,000,000 by the number of shares outstanding, which is 2,000,000. This calculation does not take into account the potential dilution of shares that could occur if all the share options held by upper management were exercised. Therefore, this calculation overestimates the company's earnings per share, which could mislead investors into thinking the company is more profitable per share than it actually is. It is important to include all potential new shares in the denominator of the EPS formula to get a more accurate and conservative estimate of the company's profitability.

C is incorrect. This option calculates the EPS as \$1.67 by subtracting the number of option shares from the number of shares outstanding in the denominator of the formula. This calculation is incorrect because it does not take into account the potential dilution of shares that could occur if all the share options held by upper management were exercised. By subtracting these potential new shares from the denominator of the formula, this calculation underestimates the company's earnings per share, which could mislead investors into thinking the company is less profitable per share than it actually is. It is important to include all potential new shares in the denominator of the EPS formula to get a more accurate and conservative estimate of the company's profitability.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 2 - Analyzing Income Statements, LOS 2d: Describe how earnings per share is calculated and calculate and interpret a company's basic and diluted earnings per share for companies with simple and complex capital structures including those with anti-dilutive securities.

Q.52 MZJ & Sons, an audit firm, is reviewing the financial statements of Xspace, a space tech firm. Xspace has developed a communication device that will never require being charged nor require any batteries. Since the scope of the valuation of such a product is limited, the auditors are unable to express their opinion. In such a situations an auditor will *most likely* issue a/an:

- A. disclaimer of opinion.
- B. qualified audit opinion.
- C. unqualified audit opinion.

In this scenario, MZJ & Sons, the audit firm, is unable to express an opinion on the financial statements of Xspace, a space tech firm. This is due to the limited scope of valuation for a unique product developed by Xspace - a communication device that never requires charging or batteries. In such situations, the most appropriate response from an auditor is to issue a disclaimer of opinion, which is option A.

A disclaimer of opinion is issued when an auditor is unable to complete an appropriate audit on certain aspects of the company's financial statements. This could be due to a lack of sufficient evidence or restrictions imposed by the client or circumstances beyond the auditor's control. In this case, the unique nature of Xspace's product and the limited scope for its valuation make it difficult for the auditor to form an opinion, leading to a disclaimer of opinion.

B is incorrect. A qualified audit opinion is issued when the auditor has reservations about certain aspects of the financial statements, but the rest of the audit has been carried out satisfactorily. This usually indicates that there is a limitation to the scope of the audit or an exception to the accounting standards. However, in this case, the issue is not with a specific aspect of the financial statements but with the overall ability of the auditor to form an opinion due to the unique nature of the product. Therefore, a qualified audit opinion would not be appropriate.

C is incorrect. An unqualified audit opinion, also known as a clean opinion, is issued when the auditor believes that the financial statements are free from material omissions and errors and have been prepared in accordance with the relevant accounting standards. In this scenario, the auditor is unable to form an opinion due to the limited scope of valuation for Xspace's product. Therefore, an unqualified audit opinion would not be appropriate.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 1 - Introduction to Financial Statement Analysis, LOS 1c: Describe the importance of regulatory filings, financial statement notes and supplementary information, management's commentary, and audit reports.

Q.53 A company's common size balance sheet as of 31st December 2019 of a company is shown below:

Assets	Percent
Cash and Cash Equivalents	45.1
Stock Inventories	0.9
Marketable Securities	8
Total Current Assets	54
Goodwill	41
Net PPE	2.6
Other Long-Term Assets	2.4
Total Assets	100
Liabilities and Shareholders' Equity	
Short term debts	2.8
Customer deposits and unearned revenue	17.2
Total Current Liabilities	20.0
Long Term Debts	19.1
Other Long-term Liabilities	10.9
Total Liabilities	50.0
Total Shareholders' Equity	50.0
Total Liabilities and Shareholders' Equity	100.0

If the industry has a debt to equity ratio of 50% and a long-term debt to equity ratio of 40%, the above Company *most likely*:

- A. Is an electric utility company.
- B. Has acquired a great deal of companies in the past.
- C. Has a higher long-term debt to equity and debt to equity ratio than that of the industry.

The above Company's goodwill is 41%. This indicates that 41% of the company's total assets are attributable to goodwill, suggesting that the Company has made significant acquisitions, as goodwill is recognized only through acquisitions.

A is incorrect. An electric utility company would likely have a higher percentage of net PPE. The above Company's net PPE is only 2.6% of the total assets, and its other long-term assets are only 2.4% of the total assets.

C is incorrect. The company's debt-to-equity ratio is calculated as follows:

$$\frac{19.1 + 2.8}{50} = 43.8\%$$

Its long-term debt to equity ratio is as follows:

$$\frac{19.1}{50} = 38.2\%$$

Both ratios are below the industry averages of 50% and 40%, respectively. Therefore, the company does not have a higher long-term debt-to-equity and debt-to-equity ratio than the industry.

CFA Level 1, Topic 3, Topic 5 - Financial Statement Analysis, Learning Module 11 - Financial Analysis Techniques, LOS 11b: Calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.54 Which of the following is the SEC form required for firms in the United States of America to file before the sale of new securities to the public?

- A. Form S-1.
- B. Form 10-Q.
- C. Form DEF 14A.

The Securities and Exchange Commission (SEC) in the United States mandates that firms must file Form S-1 before they can sell new securities to the public. This form is essentially a registration statement that provides detailed information about the company's business operations, financial condition, and management. It also includes information about the securities being offered for sale. This form is crucial as it allows potential investors to make informed decisions about whether or not to invest in the company's securities. This is why option A, Form S-1, is the correct answer.

B is incorrect. SEC Form 10-Q is not the form required before the sale of new securities to the public. Instead, it is a comprehensive report of a company's financial performance that must be submitted quarterly by all public companies to the SEC. This form includes unaudited financial statements and provides a continuing view of the company's financial position during the year. While it is an important document for investors and analysts, it is not the form required prior to the sale of new securities.

C is incorrect. SEC Form DEF 14A, also known as a "definitive proxy statement," is not the form required before the sale of new securities to the public. This form is required when a shareholder vote is needed. It provides information about the issues to be voted on at a company's annual meeting, including the election of directors and other significant corporate events. While it is an important document for shareholders, it is not the form required prior to the sale of new securities.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 1 - Introduction to Financial Statement Analysis, LOS 1c: Describe the importance of regulatory filings, financial statement notes and supplementary information, management's commentary, and audit reports.

Q.55 You have been given the following data regarding a textile firm reporting under US GAAP:
On December 31st, 2016: Free cash flow for the firm (FCFF): \$5 million Debt to equity ratio:

2:3 Total assets: \$12.5 million Capital expenditures: \$ 2 million Net borrowing: \$ 1.5 million Tax rate: 25% Interest rate expense: \$ 3 million From the given data, Free Cash Flow to Equity (FCFE) is *closest to*:

- A. \$2.75 million.
- B. \$4.25 million.
- C. \$5.00 million.

First, we need to calculate the Cash Flow from Operations (CFO). The formula for Free Cash Flow for the Firm (FCFF) is:

$$\text{FCFF} = \text{CFO} + \text{Interest} \times (1 - \text{Tax rate}) - \text{Fixed Capital Investment (FCInv)}$$

We are given:

- $\text{FCFF} = \$5 \text{ million}$,
- $\text{Interest} = \$3 \text{ million}$,
- $\text{Tax rate} = 25\%$,
- $\text{FCInv} = \$2 \text{ million}$.

Rearranging the FCFF formula to solve for CFO:

$$\text{CFO} = \text{FCFF} - \text{Interest} \times (1 - \text{Tax rate}) + \text{FCInv}$$

Substituting the given values:

$$\text{CFO} = 5 \text{ million} - 3 \text{ million} \times (1 - 0.25) + 2 \text{ million}$$

$$\text{CFO} = 5 \text{ million} - 3 \times 0.75 + 2 \text{ million}$$

$$\text{CFO} = 5 - 2.25 + 2 = 4.75 \text{ million}$$

Now that we have the CFO, we can calculate Free Cash Flow to Equity (FCFE) using the formula:

$$\text{FCFE} = \text{CFO} - \text{FCInv} + \text{Net Borrowings}$$

Substituting the values into the FCFE formula:

$$\text{FCFE} = 4.75 \text{ million} - 2 \text{ million} + 1.5 \text{ million}$$

$$\text{FCFE} = 4.25 \text{ million}$$

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 5 - Analyzing Statements of Cashflows 2, LOS 5b: Calculate and interpret free cash flow to the firm, free cash flow to equity, and performance and coverage cash flow ratios.

Q.56 FINA Inc. is a construction company operating in the U.S. It is working on a long-term project whose outcome cannot be reliably measured. Assuming that FINA follows US GAAP, the most appropriate revenue recognition method(s) for the project is:

- A. The completed-contract method.
- B. The percentage of completion method.
- C. The percentage of completion method or the completed contract method.

The completed-contract method, as indicated in option A, is the most suitable method for long-term projects where the outcome cannot be reliably estimated. This method is particularly useful in the construction industry, where FINA Inc. operates. The reason for this is that the completed-contract method allows revenue and profit to be recognized only when the contract is fully completed. This is especially beneficial for projects with uncertain outcomes, as it prevents the premature recognition of revenue and profit, which could potentially lead to financial misstatements. This method is in line with the conservatism principle of accounting, which advises against the overstatement of income and assets.

B is incorrect. The percentage of completion method, as suggested in option B, is not suitable for long-term projects where the outcome cannot be reliably estimated. This method involves recognizing revenue and expenses as a percentage of the work completed during the period. However, for projects with uncertain outcomes, it can be challenging to accurately determine the percentage of work completed, which could lead to inaccurate revenue and expense recognition. Furthermore, this method could potentially lead to the premature recognition of revenue and profit, which is not in line with the conservatism principle of accounting.

C is incorrect. While option C suggests that either the percentage of completion method or the completed contract method could be used, this is not accurate in the context of long-term projects with uncertain outcomes. As explained earlier, the percentage of completion method is not suitable for such projects due to the difficulty in accurately determining the percentage of work completed. On the other hand, while the completed contract method is more appropriate, it is not the only method that could be used, as suggested in option C. Other methods, such as the cost recovery method, could also be suitable depending on the specific circumstances of the project.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 2 - Analyzing Income Statements, LOS 2a: Describe general principles of revenue recognition, specific revenue recognition applications, and implications of revenue recognition choices for financial analysis.

Q.57 An accountant is analyzing the financial reports of an American chocolate firm. The information regarding the cost of its ice cream plant is given in the following table:

Book value of the plant	\$400,000
Accumulated depreciation	\$25,000
Fair value	\$370,000
Selling cost	\$15,000
Value in use	\$360,000
Expected future cash flow	\$350,000

If the American firm reports under US GAAP, the new balance sheet value of the asset is *closest to*:

- A. \$350,000
- B. \$360,000
- C. \$370,000

Under the US GAAP, the process of testing and calculating impairment losses is a two-step process. The first step involves determining if an asset is impaired. This is done by comparing the carrying value of the asset with the asset's undiscounted cash flow stream. If the carrying value exceeds the cash flow stream, the asset is considered impaired. The second step involves writing down the asset to its fair value and recognizing a loss.

In this particular scenario, the carrying value of the asset is calculated by subtracting the accumulated depreciation from the book value of the plant. This gives us \$400,000 (Book value) - \$25,000 (Accumulated Depreciation) = \$375,000 (Carrying Value).

Next, we compare the carrying value (\$375,000) with the expected future cash flows (\$350,000). Since the carrying value is greater than the cash flows, the asset is deemed to be impaired. The impairment loss is then calculated by subtracting the fair value from the carrying value. This gives us \$375,000 (Carrying Value) - \$370,000 (Fair Value) = \$5,000 (Impairment Loss).

Finally, the new carrying value of the asset is determined by writing down the asset to its fair value. This gives us a new carrying value of \$370,000.

Option A is incorrect. This option suggests that the new balance sheet value of the asset is \$350,000, which represents the expected future cash flows. However, under US GAAP, an impaired asset is written down to its fair value, not its expected future cash flows. Therefore, this option is incorrect.

Option B is incorrect. This option suggests that the new balance sheet value of the asset is \$360,000, which represents the value in use. However, under US GAAP, an impaired asset is written down to its fair value, not its value in use. Therefore, this option is incorrect.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 7 - Analysis of long term assets, LOS 7b: Explain and evaluate how impairment and derecognition of property, plant, and equipment, and intangible assets affect the financial statements and ratios.

Q.58 One year ago, Malzhem Inc. bought a corporate bond for \$1,000 and classified it as available for sale. It collected \$50 in coupons, and the bond is now worth \$1,040. On its balance sheet, Malzhem Inc. should show for this bond a value of:

A. \$1,000

B. \$1,040

C. \$1,090

Option B is the correct answer because available-for-sale securities, such as the corporate bond in question, are required to be shown at their fair value on the balance sheet. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In this case, the fair value of the bond is \$1,040, which is the current market price. This is in line with the Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) which require that available-for-sale securities be reported at fair value on the balance sheet. The changes in fair value are not recognized in earnings but instead are reported in other comprehensive income until the investment is sold. Therefore, Malzhem Inc. should show a value of \$1,040 for this bond on its balance sheet.

A is incorrect. This option suggests that the bond should be shown at its purchase price of \$1,000 on the balance sheet. However, this is not in line with the accounting standards for available-for-sale securities. These securities are not reported at their historical cost but at their fair value. The historical cost principle is generally used for assets that are held for use in the business, not for investment purposes. Therefore, showing the bond at its purchase price would not reflect its current economic value and would not provide accurate information to the users of the financial statements.

C is incorrect. This option suggests that the bond should be shown at a value of \$1,090 on the balance sheet, which is the sum of the purchase price and the coupons collected. However, this is not correct. The coupons collected are recognized as interest income in the income statement, not added to the value of the bond on the balance sheet. Furthermore, the value of the bond on the balance sheet should reflect its fair value, not the sum of its purchase price and the coupons collected. Therefore, showing the bond at a value of \$1,090 would not provide accurate information about its current economic value.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning module 3 - Analyzing Balance Sheets, LOS 3c: Explain the financial reporting and disclosures related to financial instruments.

Q.59 Everest Bank is analyzing D-Corp to measure its ability to pay off a long-term debt that D-Corp has recently applied for. Which of the following analyses will serve this purpose?

- A. Solvency analysis.
- B. Liquidity analysis.
- C. Profitability analysis.

Solvency analysis is a tool used by financial institutions and investors to evaluate a company's ability to meet its long-term financial obligations. It involves the examination of a company's sources of income, its debt levels, and its assets. The solvency ratio, which is calculated by dividing a company's after-tax net profit by its total debt obligations, is a key metric in solvency analysis. A high solvency ratio indicates a more creditworthy and financially sound company in the long term. Therefore, for Everest Bank, conducting a solvency analysis on D-Corp would provide a clear picture of D-Corp's ability to service its long-term debt.

B is incorrect. Liquidity analysis, while an important tool in financial analysis, is not the most appropriate method for assessing a company's ability to service long-term debt. Liquidity analysis focuses on a company's short-term financial health, specifically its ability to meet its short-term obligations. It involves the examination of a company's current assets and current liabilities to determine if it can cover its short-term debts. Key metrics in liquidity analysis include the current ratio and the quick ratio. While these provide valuable insights into a company's short-term financial health, they do not provide comprehensive information about a company's long-term debt servicing ability.

C is incorrect. Profitability analysis is another important tool in financial analysis, but it is not the most suitable for assessing a company's ability to service long-term debt. Profitability analysis focuses on a company's ability to generate profits. It involves the examination of a company's revenue, costs, and expenses to determine its profitability. Key metrics in profitability analysis include gross profit margin, net profit margin, and return on investment. While these metrics provide valuable insights into a company's profitability, they do not directly indicate a company's ability to service its long-term debt.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 11 - Financial Analysis Techniques, LOS 11b: Calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.60 A firm following IFRS reports its inventory with a carrying value of \$450,000. If the net realizable value of inventory is \$500,000, then the amount of the gain/loss on write-down of inventory assuming there is no previous inventory write-down is *closest* to:

- A. \$0 .
- B. A 50,000 gain.
- C. A \$50,000 loss.

According to the International Financial Reporting Standards (IFRS), a company should write down the value of its inventory when the carrying value of the inventory is greater than the net realizable value (NRV). The NRV is calculated by subtracting the estimated selling costs from the estimated selling price. In this case, the carrying value of the inventory is \$450,000, which is less than the NRV of \$500,000. Therefore, there is no need for the company to write down the value of its inventory. As a result, there will be no gain or loss recognized in the financial statements. This is in line with the IFRS's principle of conservatism, which states that companies should always report the least favorable figures in their financial statements to avoid overstating their financial position.

B is incorrect. Under the IFRS, a gain is only recognized when the NRV of the inventory is less than the carrying value, and the company subsequently sells the inventory for a price higher than its carrying value. In this case, the NRV is higher than the carrying value, so there is no need for a write-down, and hence, no gain is recognized. Furthermore, the US GAAP, which is mentioned in the original solution, is not relevant in this context as the question specifically refers to the IFRS.

C is incorrect. Under the IFRS, a loss is only recognized when the carrying value of the inventory is greater than the NRV, and the company subsequently sells the inventory for a price lower than its carrying value. In this case, the carrying value is less than the NRV, so there is no need for a write-down, and hence, no loss is recognized. The mention of the US GAAP in the original solution is again irrelevant in this context as the question specifically refers to the IFRS.

CFA Level 1, Topic 3 - Financial Statement Analysis, Learning Module 6 - Analysis of Inventories, LOS 6a: Describe the measurement of inventory at the lower of cost and net realizable value and its implications for financial statements and ratios.

Q.61 Concerning the acceptance of gifts, the CFA Institute:

- A. discourages customary business-related entertainment.
- B. encourages setting a strict value limit for acceptable gifts.
- C. encourages accepting gifts from parties other than clients.

The CFA Institute, in its guidelines concerning the acceptance of gifts, encourages setting a strict value limit for acceptable gifts. This is because the value of a gift can potentially influence the decision-making process of the recipient, leading to conflicts of interest or unethical behavior. By setting a strict value limit, the CFA Institute aims to minimize the potential for such conflicts and maintain the integrity of the financial industry. This is why option B is the correct answer.

A is incorrect. The CFA Institute does not discourage customary business-related entertainment. In fact, such activities are often seen as a normal part of business operations, provided they do not influence or reward the member or candidate in a way that could lead to conflicts of interest or unethical behavior. The key here is the intent behind the entertainment - if it is not meant to unduly influence the recipient, it is generally acceptable. Therefore, the assertion that the CFA Institute discourages such activities is incorrect.

C is incorrect. The CFA Institute does not encourage accepting gifts from parties other than clients. The institute's guidelines on Additional Compensation and Arrangements clearly state that Members and Candidates must not accept gifts, benefits, compensation, or consideration that competes with or might reasonably be expected to create a conflict of interest with their employer's interest unless they obtain written consent from all parties involved. This includes gifts from parties other than clients. Accepting such gifts could potentially lead to conflicts of interest and is therefore not encouraged by the CFA Institute.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.62 Hart Lewis, a fund manager at Maritime Inc., runs an emerging market fixed-income hedge fund. The latest securities being evaluated by Lewis are African corporate. Due to the inefficiency of the corporate bond markets in which the issuers operate, security prices have not increased to reflect the early signs of recovery in the credit markets and economy. Lewis takes advantage of the information lag and purchases a significant number of corporate bonds for the fund. Bond prices immediately surge following the fund's purchase, leaving investors to question whether the firm has engaged in market manipulation. Has Lewis engaged in market manipulation?

- A. No.
- B. Yes, his activities have artificially distorted bond prices.
- C. Yes, he has engaged in information-based manipulation.

Hart Lewis, a fund manager at Maritime Inc., has not engaged in market manipulation. According to Standard II (B) - Market Manipulation of the CFA Institute's Code of Ethics and Standards of Professional Conduct, market manipulation is defined as the distortion of prices or price relationships, typically through deceptive practices, for personal gain or to mislead others. In this case, Lewis has not distorted prices or price relationships, nor has he used deceptive practices. Instead, he has used his knowledge and understanding of the market inefficiencies to make informed investment decisions. This is a legitimate trading strategy and is not considered market manipulation.

B is incorrect. Lewis has not manipulated the market or the prices of the bonds. He has simply taken advantage of the inefficiencies in the market to make informed investment decisions. He has not used deceptive practices or distorted prices for personal gain or to mislead others.

C is incorrect. Information-based manipulation involves the use of false or misleading information to manipulate the market or the prices of securities. In this case, Lewis has not used false or misleading information. He has simply used his knowledge and understanding of the market inefficiencies to make informed investment decisions.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.63 Jason Lee is the senior portfolio manager at Motto Trust, an asset advisory firm. Lee has been invited to attend a tax conference sponsored by a tax advisory firm owned by his clients to enhance his tax management skills. The client has offered to fully pay for transportation to the conference, but Lee declines and instead opts for his arrangement. Lee informs his supervisor of the conference invitation received before departing. After the conference, the tax advisory firm's senior manager invites Lee to an exclusive golf club, which he accepts. He informs his employer about the invitation upon returning to work the following day. Has Lee *most likely* violated any CFA Institute Standards of Professional Conduct?

- A. No.
- B. Yes, but only concerning attending the conference.
- C. Yes, but only concerning accepting the golf club invitation.

Jason Lee has not violated any CFA Institute Standards of Professional Conduct. The Standards of Professional Conduct set by the CFA Institute are designed to promote ethical behavior and decision-making by financial professionals. In this scenario, Lee has demonstrated adherence to these standards in several ways. Firstly, he declined the offer from his client to pay for his transportation to the conference. This decision aligns with the Standard relating to independence and objectivity, which requires professionals to avoid situations that could compromise their professional judgment or create a conflict of interest. By arranging his own transportation, Lee ensured that his independence and objectivity were not compromised.

B is incorrect. The conference was sponsored by a tax advisory firm owned by his clients and was intended to enhance his tax management skills. Attending such events for professional development and skill enhancement is not a violation of the CFA Institute's Standards of Professional Conduct. Furthermore, Lee informed his supervisor about the conference invitation, demonstrating transparency and adherence to professional standards.

C is incorrect. Accepting such an invitation is not inherently a violation of the standards. The key factor is whether the acceptance of the invitation could compromise the professional's independence and objectivity. In this case, Lee informed his employer about the invitation upon his return to work, demonstrating transparency. Furthermore, the invitation was not available beforehand, so informing his employer upon returning to the firm was the best course of action. Therefore, accepting the golf club invitation under these circumstances does not constitute a violation of the CFA Institute's Standards of Professional Conduct.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.64 Which of these agents can *most accurately* claim compliance with GIPS?

- I. Investment management firms managing assets.
- II. Plan sponsors not managing assets.
- III. Vendors providing investment management software.

- A. Agent I.
- B. Agent I and II.
- C. Agents I, II, III.

The Global Investment Performance Standards (GIPS) are a set of standardized, industry-wide ethical principles that guide investment firms on how to calculate and present their investment results to prospective clients. The main objective of GIPS is to promote transparency and comparability among investment firms.

GIPS are specifically designed for investment management firms that manage assets. These firms are responsible for managing the assets of their clients and making investment decisions on their behalf. Therefore, they are required to comply with GIPS to ensure that they are providing accurate and consistent performance data to their clients. Compliance with GIPS demonstrates the firm's commitment to ethical best practices and transparency, which can enhance its credibility and trustworthiness in the eyes of clients and potential clients.

B is incorrect. Plan sponsors, such as pension funds or insurance companies, are not typically involved in the day-to-day management of assets. Instead, they hire investment management firms to manage the assets on their behalf. Therefore, they are not required to comply with GIPS, as they are not directly involved in the investment decision-making process. Claiming GIPS compliance would not be relevant or applicable to their role and responsibilities.

C is incorrect. Vendors providing investment management software are not involved in the management of assets or the investment decision-making process. Their role is to provide software solutions that assist investment management firms in managing their clients' assets. Therefore, they are not required to comply with GIPS, as these standards are not relevant or applicable to their role and responsibilities. Claiming GIPS compliance would not enhance their credibility or trustworthiness, as they are not involved in the investment decision-making process.

CFA Level 1, Topic 10 - Ethics, Learning Module 4 - Introduction to the Global Investment Performance Standards, LOS 4a: Explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is benefitted by the standards.

Q.65 Dana Irk and Carl Scholes are CFA Level II candidates who have recently sat for the Level II exam and are awaiting their results. In a discussion between the two candidates, they each comment: Irk: "This year, the exam did not feature any questions on currency futures." Scholes: "I found the quantitative techniques section particularly difficult this year, as there were long calculations in many questions." Which candidate's statement is most likely in violation of the CFA Institute Standards of Professional Conduct?

- A. Irk.
- B. Scholes.
- C. Both Irk and Scholes.

Both Dana Irk and Carl Scholes have violated the CFA Institute Standards of Professional Conduct. The Standards of Professional Conduct require that CFA candidates maintain the confidentiality of the CFA exam content. This includes not discussing specific topics or types of questions that were or were not included in the exam.

A is incorrect. Dana Irk's comment about the absence of questions on currency futures in the exam is a clear violation of the Standards. By revealing this information, she is providing specific details about the exam content, which is strictly prohibited. This could potentially give an unfair advantage to future candidates who hear this information, as they could adjust their study plans based on this insight.

B is incorrect. Carl Scholes' comment about the difficulty of the quantitative techniques section and the presence of long calculations in many questions is also a violation of the Standards. This is because he is revealing specific details about the nature and content of the exam, which is strictly prohibited. This could potentially influence the study strategies of future candidates who hear this information.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.66 When managing pooled assets to a specific mandate, investment manager(s):

- A. are not governed by the suitability standard.
- B. must consider the suitability of an investment for clients.
- C. need not consider the suitability of an investment for clients.

When managing pooled assets according to a specific mandate, investment managers are not required to consider the suitability of an investment for individual clients. This is because the pooled funds are managed according to a pre-determined mandate, which outlines the investment objectives and strategies. The investors who choose to invest in these pooled funds do so with the understanding that the investments will be made according to this mandate, not necessarily tailored to their individual investment needs or risk tolerance.

A is incorrect. While it is true that investment managers do not need to consider the suitability of each investment for each individual client when managing pooled assets, they are still governed by the suitability standard. This standard requires them to make investment decisions that are in line with the stated objectives and constraints of the portfolio, which in this case would be the specific mandate of the pooled assets.

B is incorrect. As mentioned earlier, when managing pooled assets, the investment manager's responsibility is to adhere to the specific mandate of the pooled assets, not to consider the suitability of each investment for each individual client. The suitability of the investment for individual clients is typically considered by those who have an advisory relationship with the clients, not by the investment managers of pooled assets.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.67 Which of the following actions is *least likely* considered a violation of the standard concerning Loyalty to Employers?

- A. Soliciting clients before to the cessation of employment.
- B. Using a business plan generated for the employer to start a new business.
- C. Applying specialized analytical skills gained at the previous employer in the new workplace.

The CFA Institute's Code of Ethics and Standards of Professional Conduct does not prohibit the use of skills and knowledge acquired at a previous job in a new role. The skills and experiences gained from a previous employer are considered the personal property of the employee. These skills and experiences are not proprietary information or trade secrets of the former employer. Therefore, using these skills and experiences at a new workplace does not violate the standard concerning Loyalty to Employers. The standard is designed to prevent the misuse of confidential and proprietary information, not to restrict the use of an individual's skills and knowledge.

A is incorrect. Soliciting clients prior to the cessation of employment is a clear violation of the standard concerning Loyalty to Employers. This is because it involves a conflict of interest between the employee's duty to their current employer and their personal interests. The employee is essentially using their position and the resources of their current employer to benefit their future employment or business. This is not only unethical but also potentially illegal. Therefore, this action is most likely considered a violation of the standard concerning Loyalty to Employers.

B is incorrect. Using a business plan generated for the employer to start a new business is also a violation of the standard concerning Loyalty to Employers. This is because the business plan is proprietary information of the employer. Using this information for personal gain or for the benefit of a new business is a breach of the employee's duty of loyalty to their employer. It is also a misuse of the employer's resources, which were used to develop the business plan. Therefore, this action is most likely considered a violation of the standard concerning Loyalty to Employers.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.68 David Lin, CFA, has been a portfolio manager for a large mutual fund company, focusing on technology stocks. Recently, he accepted a position as the Chief Investment Officer (CIO) at a boutique investment firm. In his new role, David is responsible for setting the overall investment strategy, managing a diversified portfolio, and ensuring compliance with regulatory standards. To prepare for his new responsibilities, David takes advanced courses on portfolio diversification and risk management, subscribes to industry publications, and attends regulatory compliance workshops. With respect to his obligations under the CFA Code and Standards, David's actions:

- A. are sufficient because he has addressed key aspects of portfolio management and regulatory compliance.
- B. are lacking as he has not focused on strategic decision-making and corporate governance training.
- C. meet the requirements because his participation in advanced courses and workshops demonstrates a commitment to competence.

Standard I(E) Competence, as outlined in the CFA Code and Standards, mandates that CFA members and candidates maintain the competence necessary to fulfill their professional responsibilities. In the context of David's new role as Chief Investment Officer (CIO), this would entail a comprehensive understanding and proficiency in strategic decision-making and corporate governance, in addition to portfolio management and regulatory compliance. However, David's preparation appears to be lacking in these crucial areas. While he has taken advanced courses on portfolio diversification and risk management, subscribed to industry publications, and attended regulatory compliance workshops, there is no mention of him seeking training in strategic decision-making and corporate governance. These are key competencies for a CIO, and his lack of training in these areas renders his preparation insufficient.

A is incorrect. The statement that David's actions are sufficient because he has addressed key aspects of portfolio management and regulatory compliance is misleading. While these areas are indeed important, they do not encompass the full range of competencies required for the CIO role. Strategic decision-making and corporate governance are equally, if not more, important in this context. Therefore, despite his efforts in portfolio management and regulatory compliance, David's preparation is not sufficient.

C is incorrect. While David's participation in advanced courses and workshops does demonstrate a commitment to competence, it does not fully meet the requirements. The CFA Code and Standards require a comprehensive understanding and proficiency in all areas relevant to one's professional responsibilities. In David's case, this would include strategic decision-making and corporate governance, areas in which he has not sought training. Therefore, despite his commitment to competence, his preparation does not fully meet the requirements.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.69 To comply with the CFA Institute Standards of Professional Conduct relating to duties to employers, members and candidates are *most appropriately* required to:

- A. Should not enter into an independent business while still employed.
- B. They are encouraged to recommend that their employers adopt and distribute a code of ethics.
- C. May obtain an assurance from a subordinate who has violated the Codes and Standards that the wrongdoing will not recur

The CFA Institute Standards of Professional Conduct emphasize the importance of ethical conduct in the finance profession. These standards encourage members and candidates to promote ethical behavior in their workplaces. One of the ways to do this is by recommending that their employers adopt and distribute a code of ethics. This not only helps to establish a clear understanding of what is considered ethical behavior within the organization, but also communicates to clients the company's commitment to uphold high ethical standards. This action aligns with the duties to employers as it helps to create a work environment that fosters ethical decision-making and actions, which ultimately benefits the employer.

A is incorrect. The CFA Institute Standards of Professional Conduct do not prohibit members and candidates from starting an independent business while still employed. However, they are required to notify their employers about their independent business activities. This is to ensure that there is no conflict of interest that could potentially harm the employer. The standards recognize the right of finance professionals to pursue independent business opportunities, but they also stress the importance of transparency and loyalty to the employer. Therefore, starting an independent business while still employed is not in itself a violation of the standards, as long as the appropriate disclosures are made.

C is incorrect. The CFA Institute Standards of Professional Conduct require members and candidates to take appropriate action when they discover any illegal or unethical behavior within their organization. This includes conducting a thorough investigation into the matter. Simply obtaining an assurance from a subordinate who has violated the Codes and Standards that the wrongdoing will not recur is not sufficient. The standards require a more proactive approach to dealing with such situations. This is to ensure that the violation is properly addressed and that measures are put in place to prevent similar violations in the future. Therefore, merely obtaining assurances of non-recurrence does not meet the requirements of the standards.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.70 Joyce & Monroe (J&M) is an investment bank with a research division. Investment banker Ron Howard serves J&M and has recently arranged corporate financing for its client, Westdale Limited. Westdale will be using the financing to expand production to Australia. Several weeks later, J&M's chief research analyst issues a research report on Westdale wherein he recommends, "Westdale's decision to expand into Australia is an excellent move because the potential market for its products should be vast. I am extremely confident that the company will see a remarkable and positive difference in its earnings over the coming months. Based on this, I recommend a strong BUY." According to the Standards of Practice Handbook, the analyst's recommendation *most likely* violates the Standard concerning:

- A. Misrepresentation; he is guaranteeing investment performance.
- B. Disclosure of conflicts; he has not disclosed J&M's relationship with Westdale.
- C. Communication with clients and prospects; he has failed to separate opinion from fact.

The analyst has violated the Standard concerning the disclosure of conflicts. This is because the analyst has not disclosed J&M's relationship with Westdale. The relationship between J&M and Westdale is significant because J&M has arranged corporate financing for Westdale. This relationship is long-term and should be disclosed in every report sent to clients and prospects. The failure to disclose this relationship could lead clients to believe that the analyst's judgment is not independent and objective. This is a violation of the Standards of Practice Handbook, which requires full disclosure of any potential conflicts of interest.

A is incorrect. This option suggests that the analyst has violated the Standard concerning misrepresentation by guaranteeing investment performance. However, this is not the case. The analyst has not guaranteed investment performance. Instead, he has expressed his confidence in the company's future earnings. The statement, 'I am extremely confident that the company will see a remarkable and positive difference in its earnings over the coming months,' does not constitute a guarantee. It is an expression of the analyst's opinion based on his analysis of the company and the potential market for its products in Australia. Therefore, this does not violate the Standard concerning misrepresentation.

C is incorrect. This option suggests that the analyst has violated the Standard concerning communication with clients and prospects by failing to separate opinion from fact. However, this is not the case. The analyst has clearly separated his opinion from fact in his recommendation. His statement about the potential market for Westdale's products being 'vast' is an expression of his opinion. He has not presented this as a fact. Therefore, this does not violate the Standard concerning communication with clients and prospects.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.71 Jimmy Tucker, CFA, works as an investment advisor at Perfect Investments Private Limited. Tucker discovers that one of the corporate clients covered by his firm is involved in tax disputes. Tucker's firm is reluctant to disseminate an adverse opinion about the client, as it expects new business from the client. Tucker removes the controversial company from the research universe and puts it on a restricted list so that the firm disseminates only factual information about the corporate client. Tucker has *most likely*:

- A. Violated Standard I(B) - Independence and Objectivity by concealing information about the client.
- B. Violated Standard I(B) - Independence and Objectivity by not expressing any opinion about the corporate client.
- C. Not violated Standard I(B) - Independence and Objectivity by not expressing his opinion about the corporate client.

Option C aligns with the guidelines of Standard I(B) - Independence and Objectivity. This standard, as outlined by the CFA Institute, stipulates that if a firm is unwilling to allow the dissemination of adverse opinions about a corporate client, professionals within the firm should advocate for the removal of the controversial company from the research universe. Instead, the company should be placed on a restricted list, which would limit the firm's dissemination to only factual information about the company. In this case, Jimmy Tucker, CFA, has adhered to this standard by removing the controversial company from the research universe and placing it on a restricted list. This action ensures that his firm only disseminates factual information about the corporate client, thereby maintaining the firm's independence and objectivity.

A is incorrect. Tucker did not conceal any information; instead, he took steps to ensure that only factual information about the client was disseminated. This action is in line with the guidelines of Standard I(B), which encourages professionals to advocate for the removal of controversial companies from the research universe if the firm is unwilling to disseminate adverse opinions about them.

B is incorrect. Standard I(B) does not mandate professionals to express their opinions about corporate clients. Instead, it emphasizes the importance of maintaining independence and objectivity in professional activities. In this case, Tucker's decision to not express any opinion about the corporate client and to disseminate only factual information about the client is in line with the guidelines of the standard.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.72 Martina Gibbons is a CFA Level II Candidate. During an interview, Gibbons makes the following two statements: Statement I: "I have completed the first two levels of the CFA exam program." Statement II: "The CFA program overstresses areas such as financial analysis, which I believe are unnecessary at the Level I stage." Which of the following statements *most likely* represents a violation of the standards relating to Responsibilities as a CFA Institute Member or CFA Candidate?

- A. Statement I.
- B. Statement II.
- C. Both Statement I and II are a violation.

Martina Gibbons, as a CFA Level II Candidate, is not allowed to claim that she has completed the first two levels of the CFA exam program. This is because the term "candidate" in the context of the CFA program refers to a person who is currently enrolled in a specific level of the program and has not yet passed that level. Therefore, since Gibbons is a Level II Candidate, she has not yet passed the Level II exam and cannot claim to have done so. This misrepresentation is a violation of Standard VII(B) - Reference to CFA Institute, the CFA Designation, and the CFA Program, which states that candidates must not misrepresent or exaggerate the meaning or implications of membership in CFA Institute, holding the CFA designation, or candidacy in the CFA Program.

B is incorrect. Statement II does not represent a violation of the Standards of Professional Conduct. The CFA Institute's Standards do not prohibit candidates from expressing their personal opinions about the program. In this case, Gibbons is expressing her belief that the CFA program overemphasizes certain areas, such as financial analysis, at the Level I stage. This is a subjective opinion and does not misrepresent or exaggerate any aspect of the CFA program or the CFA Institute. Therefore, it does not violate any of the Standards of Professional Conduct.

C is incorrect. As explained above, only Statement I represents a violation of the Standards of Professional Conduct.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.73 Carmen Campbell is the supervisor of the research division of a well-known investment bank. Jenny Roberts has recently joined the firm as a research analyst and reports to Campbell. Roberts suggests that Campbell recommend a 'buy' rating on a pharmaceutical company tracked by Roberts during an informal meeting. She informs her that the company has received final FDA approval for one of its drugs with an upside potential of \$50 million. Campbell approves the research report and recommends a 'buy' rating on the stock. However, it was later discovered that the company had never received final FDA approval for the drug. Which of the following statements is the *most appropriate*

- A. Roberts has violated the Standard of Professional Conduct.
- B. Campbell has violated the Standard of Professional Conduct.
- C. Campbell and Roberts have both violated the Standard of Professional Conduct.

Both Carmen Campbell and Jenny Roberts have violated the Standard of Professional Conduct. The Standards of Professional Conduct, as outlined by the CFA Institute, require investment professionals to exercise diligence, independence, and thoroughness in analyzing investments, making investment recommendations, and taking investment actions. They also require professionals to have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action.

A is incorrect. While it is true that Jenny Roberts has violated the Standards of Professional Conduct, this option is not the most appropriate because it does not account for Carmen Campbell's violation. Roberts, as a research analyst, has the responsibility to exercise due diligence before making any investment recommendation. In this case, she failed to verify the information about the pharmaceutical company's FDA approval before suggesting a 'buy' rating. This lack of thoroughness and diligence in her research and analysis is a clear violation of the Standards of Professional Conduct.

B is incorrect. Similarly, while Carmen Campbell has indeed violated the Standards of Professional Conduct, this option is not the most appropriate because it does not account for Jenny Roberts' violation. Campbell, as the supervisor of the research division, has the responsibility to exercise reasonable supervision over the investment recommendations made by her subordinates. In this case, she failed to ensure that Roberts' recommendation was based on accurate and verified information. This lack of supervision is a clear violation of the Standards of Professional Conduct. However, the violation of the Standards of Professional Conduct is not limited to Campbell alone, as Roberts also shares in the responsibility and the violation.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.74 Marcus Davies, CFA, works at AlgoRythm Investment LLC as an investment advisor. Davies receives an offer from an educational institution for a part-time paid position as a mathematics freelance teacher. He accepts the offer and ensures that the teaching assignments will not interfere with his investment advisory commitments. Davies does not disclose the teaching assignments to his employer. Marcus Davies has *most likely*:

- A. Violated Standard IV(A) – Loyalty.
- B. Not violated Standard IV(A) – Loyalty.
- C. Violated Standard VI(A) – Disclosure of Conflicts.

Marcus Davies, in accepting a part-time position as a mathematics freelance teacher, has not violated Standard IV(A) – Loyalty, making option B the correct answer. The CFA Institute's Standard IV(A) – Loyalty, requires members and candidates to act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divert business opportunities, or make undisclosed personal profits. Davies has ensured that his new part-time teaching assignments will not interfere with his investment advisory commitments at AlgoRythm Investment LLC. This indicates that he is still prioritizing his primary employment and is not depriving his employer of his skills and abilities. Furthermore, there is no indication that Davies is diverting business opportunities from AlgoRythm Investment LLC or making undisclosed personal profits that could harm his employer.

A is incorrect. As previously mentioned, Standard IV(A) – Loyalty requires members and candidates to act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divert business opportunities, or make undisclosed personal profits. Davies has ensured that his new part-time teaching assignments will not interfere with his investment advisory commitments at AlgoRythm Investment LLC. This indicates that he is still prioritizing his primary employment and is not depriving his employer of his skills and abilities. Furthermore, there is no indication that Davies is diverting business opportunities from AlgoRythm Investment LLC or making undisclosed personal profits that could harm his employer.

C is incorrect. Standard VI(A) – Disclosure of Conflicts requires members and candidates to make full and fair disclosure of all matters that could reasonably be expected to impair their independence and objectivity or interfere with their duties to their clients, prospective clients, and employer. In this case, Davies has ensured that his new part-time teaching assignments will not interfere with his investment advisory commitments at AlgoRythm Investment LLC. Therefore, there is no conflict of interest that needs to be disclosed to his employer. Furthermore, the standard does not require disclosure of all part-time jobs, only those that could potentially create a conflict of interest.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.75 During a CFA Institute Professional Conduct Program (PCP) investigation, Jack Grant is asked to provide confidential information related to his clients. Which of the following is the *most appropriate* statement regarding a Professional Conduct Program (PCP) investigation?

- A. Accessing confidential information is not allowed during a PCP investigation.
- B. Grant must disclose the confidential information, as it will not be considered a violation of Standard III(E) – Preservation of Confidentiality.
- C. Grant must not disclose the confidential information, as it will be considered a violation of Standard III(E) – Preservation of Confidentiality.

Option B aligns with the guidelines of Standard III(E) – Preservation of Confidentiality. This standard, as part of the CFA Institute's ethical guidelines, outlines the circumstances under which the preservation of confidentiality is applicable. It is important to note that the standard does not prohibit the disclosure of confidential information during a Professional Conduct Program (PCP) investigation. This is because the PCP investigation is a process designed to uphold the integrity of the finance profession and the CFA charter. Therefore, cooperation with such an investigation, including the disclosure of confidential information when requested, is not considered a violation of the standard. This is a crucial aspect of maintaining the trust and confidence of the public in the finance profession and the CFA charter.

A is incorrect. As mentioned earlier, Standard III(E) does not prohibit the disclosure of confidential information during a PCP investigation. The standard recognizes the importance of such investigations in maintaining the integrity of the finance profession and the CFA charter. Therefore, it allows for the disclosure of confidential information when necessary for the investigation.

C is incorrect. As explained earlier, the standard does not consider the disclosure of confidential information during a PCP investigation as a violation. The standard recognizes the importance of such investigations in upholding the integrity of the finance profession and the CFA charter. Therefore, it allows for the disclosure of confidential information when necessary for the investigation.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.76 Gregory Mayer, CFA, works at Diligent Investors Private Limited. Mayer is a pacifist at heart and often participates in demonstrations against weapons manufacturing firms. In the country in which Mayer resides, participating in protests is a criminal act; thus, he has been arrested on numerous occasions. Mayer has *most likely*:

- A. Not violated Standard I(D) – Misconduct.
- B. Violated Standard I(D) – Misconduct by committing a criminal act.
- C. Violated Standard I(D) – Misconduct by adversely getting arrested on several occasions.

Standard I(D) – Misconduct in the CFA Institute's Code of Ethics and Standards of Professional Conduct states that a member or candidate must not engage in any professional conduct involving dishonesty, fraud, deceit, or misrepresentation, or commit any act that reflects adversely on their professional reputation, integrity, or competence. In the case of Gregory Mayer, his participation in demonstrations against weapons manufacturing firms, even though it is considered a criminal act in his country, does not involve dishonesty, fraud, deceit, or misrepresentation. Furthermore, his actions do not reflect adversely on his professional reputation, integrity, or competence. His actions are driven by his personal beliefs and do not interfere with his professional conduct or responsibilities.

B is incorrect. The CFA Institute's Code of Ethics and Standards of Professional Conduct does not categorically state that any act considered criminal by a jurisdiction's law is a violation of Standard I(D). The act must involve dishonesty, fraud, deceit, or misrepresentation, or reflect adversely on a member's or candidate's professional reputation, integrity, or competence. Mayer's participation in demonstrations, although considered a criminal act in his country, does not meet these criteria.

C is incorrect. This option suggests that Mayer has violated Standard I(D) – Misconduct by getting arrested on several occasions. However, the frequency of Mayer's arrests does not automatically constitute a violation of Standard I(D). The nature of the act leading to the arrest is what determines whether a violation has occurred. In Mayer's case, his arrests are a result of his participation in demonstrations against weapons manufacturing firms, an act driven by his personal beliefs and not involving dishonesty, fraud, deceit, or misrepresentation.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.77 Mark Michler is a financial analyst charged with developing performance projections for Tike Limited for the financial years 2015 to 2030. He uses a forecasting model developed by his supervisor to extrapolate historical performance information (from 1990 to 2014) into the future, make further adjustments, and publish the forecasts in his research report. He includes a small disclosure at the end of the report, which reads, "All forecasts represent simulations of past performance." Is Michler *most likely* in violation of any CFA Institute Standards of Professional Conduct?

- A. No.
- B. Yes, he is not permitted to use simulated performance information.
- C. Yes, his disclosure does not provide full details on the simulated performance.

Mark Michler's disclosure is in violation of the CFA Institute Standards of Professional Conduct regarding performance presentation. The Standards require that when using simulated performance information, the analyst must provide full and clear disclosure about the source of the performance data and the period of the historical performance. In this case, Michler only discloses that the forecasts are simulations of past performance, but he does not provide any information about the source of the data or the period of the historical performance. This lack of full disclosure could potentially mislead the readers of his report, as they may not be aware of the basis on which the forecasts are made.

A is incorrect. As explained above, Michler's disclosure does not meet the requirements of the Standards regarding performance presentation. He fails to provide full and clear disclosure about the source of the performance data and the period of the historical performance. This lack of full disclosure could potentially mislead the readers of his report.

B is incorrect. The CFA Institute Standards of Professional Conduct do not prohibit the use of simulated performance information. However, they do require that when using such information, the analyst must provide full and clear disclosure about the source of the performance data and the period of the historical performance. In this case, Michler fails to provide such disclosure, which is why he is in violation of the Standards.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.78 Glen Warren, CFA, writes a report to his clients describing a new financial product recently launched by his investment firm. The new product is designed to generate great returns in case market volatility increases. An extract of the report is given below: "The product will generate great returns in case of increased market volatility. However, as the trading techniques used to generate the return are deemed proprietary, they cannot be disclosed in the report." This extract from the report is *most likely*:

- A. Not in violation of the Standards.
- B. In violation of Standard III(D) – Performance Presentation.
- C. In violation of Standard V(B) – Communication with Clients and Prospective Clients.

Option C refers to Standard V(B) – Communication with Clients and Prospective Clients. This standard stipulates that investment professionals must disclose the basic nature of the strategy employed to generate returns. This is to ensure that prospective clients are fully aware of the risks associated with the trade or product. In the given scenario, Glen Warren, CFA, has failed to disclose the trading techniques used to generate returns for the new financial product. He has justified this by claiming that the techniques are proprietary and therefore cannot be disclosed. This is a clear violation of Standard V(B), as it prevents clients and prospective clients from fully understanding the risks associated with the product. The lack of transparency could potentially lead to misinformed investment decisions, which is contrary to the principles of the CFA Institute's Code of Ethics and Standards of Professional Conduct.

A is incorrect. As explained above his failure to disclose the trading techniques used to generate returns is a violation of Standard V(B) – Communication with Clients and Prospective Clients. The Standards require investment professionals to provide sufficient information to clients and prospective clients to enable them to make informed investment decisions. By withholding information about the trading techniques, Glen Warren is preventing his clients from fully understanding the risks associated with the new financial product.

B is incorrect. Standard III(D) requires investment professionals to present performance information that is fair, accurate, and complete. In the given scenario, there is no indication that Glen Warren has misrepresented or omitted performance information. His violation relates to the lack of disclosure about the trading techniques used to generate returns, which falls under Standard V(B) – Communication with Clients and Prospective Clients, not Standard III(D) – Performance Presentation.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.79 Kim Fowler, CFA, is the director of the investment research team at Excellent Investors LLC. Fowler covers stocks that are illiquid and have low trading volumes. She has access to multiple sources which provide the price of these illiquid securities. Fowler consistently reports the price published in ABC Times. The latest price published by other sources, including ABC Times, is given below:

ABC Times	XYZ Magazine	MBC Financial Times	EDF Business Weekly	QWE Times
\$12.50	\$11.50	\$10.65	\$13.00	\$11.12

In her latest report, Fowler again publishes the price of the illiquid stock as published in ABC times. Fowler has *most likely*:

- A. Not violated the Standards.
- B. Violated Standard I(C) – Misrepresentation by quoting a higher price.
- C. Violated Standard III(B) – Fair Dealing by not fairly dealing with her clients.

Kim Fowler, who is a CFA and the director of the investment research team at Excellent Investors LLC, has been consistently reporting the price of an illiquid security as published in ABC Times. Illiquid securities are those that cannot be sold quickly because of a lack of ready and willing investors or speculators to purchase the security. These securities have low trading volumes and their prices can be highly volatile. Fowler has access to multiple sources which provide the price of these illiquid securities, but she consistently reports the price published in ABC Times.

According to the CFA Institute's Standards of Professional Conduct, Standard I(C) – Misrepresentation specifies that in the case of illiquid securities, the source must be consistent and must not be based solely on the price quoted. The standard also states that members and candidates must not knowingly make any misrepresentations relating to investment analysis, recommendations, actions, or other professional activities. In this case, Fowler has been consistent in her source of pricing information and has not based her reports solely on the price quoted. Therefore, she has not violated Standard I(C) – Misrepresentation by quoting the price published in ABC Times.

B is incorrect. The aspect of misrepresentation is not applicable as far as quoting a higher price is concerned. Misrepresentation would involve knowingly providing false or misleading information. In this case, Fowler is not misrepresenting the price of the illiquid security. She is simply reporting the price as published in ABC Times. Furthermore, the prices quoted by ABC Times are lower than those quoted by EDF Business Weekly.

C is incorrect. Standard III(B) – Fair Dealing requires members and candidates to deal fairly and objectively with all clients when providing investment analysis, making investment recommendations, taking investment action, or engaging in other professional activities. In this case, Fowler has not violated Standard III(B) since she has developed written trade allocation procedures—ensure fairness to clients, timely and efficient order execution, and accuracy of client positions. She is providing the same information to all her clients, which is in line with the requirement of fair dealing.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.80 Kurt Gallagher, CFA, works as a portfolio manager at Excellent Investment Advisors. During a meeting with a long-term friend, Gallagher receives material information connected with some of his clients' stock in their portfolios. Keith's *most likely* course of action is to:

- A. Keep the information secret.
- B. Not alter his current trades based on the information.
- C. Try to achieve public dissemination of the information.

Option C is in line with Standard II(A) – Material Non-Public Information of the CFA Institute's Code of Ethics and Standards of Professional Conduct. According to this standard, when a member or candidate receives material non-public information, they are required to make reasonable efforts to achieve public dissemination of this information. This is because the information is considered "material" and could potentially affect the price of a security or influence an investor's decision. Therefore, it is crucial that this information is made public to ensure a fair and transparent market where all investors have access to the same information.

A is incorrect. The suggestion to keep the information secret contradicts the principles of transparency and fairness in financial markets. Material information is defined as information that a reasonable investor would want to know before making an investment decision, or information that could affect the price of a security. Keeping such information secret could lead to unfair advantages for some investors and could potentially distort the market. Therefore, this option is not in line with the ethical standards set by the CFA Institute.

B is incorrect. The suggestion not to alter current trades based on the information received is also not in line with the ethical standards set by the CFA Institute. According to Standard II(A), Gallagher's responsibility upon receiving material non-public information is to determine if the information has been publicly disseminated before acting or causing his clients to act on it. If the information has not been publicly disseminated, Gallagher is required to make reasonable efforts to achieve this. Therefore, not altering current trades based on the information received could potentially lead to unfair advantages or disadvantages for certain investors, which is not in line with the principles of fairness and transparency in financial markets.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.81 Sarah Ali, an investment analyst serving a firm, manages several equity funds in the country of Lartha. Local laws permit investment analysts to undertake trades for accounts in which they have beneficial ownership at the same time as their employer. However, client account trades have transaction priority. Ali has identified Gerard Tech's stock as attractive for her investment portfolio, the firm's equity fund, and her client accounts. To claim compliance with the Code and Standards, after allocating the stock to client accounts, Ali is *most likely* required to purchase the stock in the following order:

- A. Herself followed by her employer.
- B. Her employer followed by herself.
- C. Simultaneously for both herself and her employer.

Sarah Ali should first purchase the stock for her employer, followed by herself is in line with the CFA Institute Standards of Professional Conduct concerning transaction priority. These standards require that trades conducted for client and employer accounts should be given preference over those conducted for an account in which a member or candidate has beneficial ownership. This is to ensure that the interests of clients and employers are prioritized over personal interests, thereby promoting fairness and integrity in investment management.

Local laws in Lartha, where Ali operates, are less strict in this regard. They place transactions undertaken on behalf of employers and beneficial ownership accounts at par. However, the CFA Institute Standards of Professional Conduct are stricter and therefore take precedence. This is in line with the Standard relating to Knowledge of the Law, which defines applicable law as the strictest between local laws or regulations and the Code and Standards.

A is incorrect. This option suggests that Ali should first purchase the stock for herself, followed by her employer. This is contrary to the CFA Institute Standards of Professional Conduct concerning transaction priority, which require that trades conducted for client and employer accounts should be given preference over those conducted for an account in which a member or candidate has beneficial ownership. By purchasing the stock for herself first, Ali would be prioritizing her personal interests over those of her employer, which is not in line with the principles of fairness and integrity in investment management.

C is incorrect. While this may seem like a fair approach, it is not in line with the CFA Institute Standards of Professional Conduct concerning transaction priority. These standards require that trades conducted for client and employer accounts should be given preference over those conducted for an account in which a member or candidate has beneficial ownership. By purchasing the stock simultaneously for both herself and her employer, Ali would not be giving preference to her employer's account, which is a violation of these standards.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3b: Recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.

Q.82 According to the Global Investment Performance Standards (GIPS), a composite is an aggregation of individual portfolios representing a similar investment mandate, objective, or strategy. It is the primary vehicle for presenting performance to prospective clients. Which of the listed items *least likely* describes some of the characteristics of a composite?

- A. It must include fee-paying portfolios managed in accordance with the same investment mandate, objective, or strategy.
- B. It must include discretionary portfolios managed in accordance with the same investment mandate, objective, or strategy.
- C. It must include discretionary and non-discretionary portfolios managed in accordance with the same investment mandate, objective, or strategy.

The GIPS stipulates that a composite should only include discretionary portfolios. The inclusion of non-discretionary portfolios would contradict the purpose of a composite, which is to represent a similar investment mandate, objective, or strategy. Non-discretionary portfolios do not provide the portfolio manager with the authority to make investment decisions, which could lead to a divergence in investment strategies and thus, distort the representation of the composite.

A is incorrect. This is in line with the GIPS, which requires that all fee-paying, discretionary portfolios following the same investment mandate, objective, or strategy be included in a composite. The inclusion of fee-paying portfolios ensures that the composite accurately represents the performance of portfolios that generate revenue for the investment manager, thus providing a realistic representation of the manager's performance.

B is incorrect. Discretionary portfolios are those where the portfolio manager has the authority to make investment decisions on behalf of the client. Including these portfolios in a composite ensures that the composite accurately represents the performance of portfolios that are managed according to the investment manager's expertise and strategy.

CFA Level 1, Topic 10 - Ethics, Learning Module 4 - Introduction to the Global Investment Performance Standards, LOS 4c: Explain the construction and purpose of composites in performance reporting.

Q.83 Grant Ross, CFA, works at Anemas Advisors Limited, an investment management firm. Anemas Advisors Limited manages several diversified mutual funds, which have consistently beaten the overall market for the 10 years the firm has been in existence. Currently, the mutual funds managed by Anemas have a few hundred investors. One month ago, Ross decided to invest in one of these diversified mutual funds personally but did not disclose his investment to management or investors. According to the CFA Code and Standards, Ross has *most likely*:

- A. Violated Standard VI(A) – Disclosure of Conflicts.
- B. Not violated the CFA Institute Code and Standards.
- C. Violated Standard V(B) – Communication with Clients and Prospective Clients.

The CFA Code and Standards does not necessitate members or candidates to disclose personal investments in diversified mutual funds unless it is specifically required by the employer. In the given scenario, Grant Ross, a CFA, decided to invest in one of the diversified mutual funds managed by his firm, Anemas Advisors Limited. However, he did not disclose his investment to the management or investors. According to the CFA Code and Standards, this action does not constitute a violation unless the employer specifically mandates the disclosure of such personal investments.

A is incorrect. Standard VI(A) of the CFA Code and Standards pertains to the disclosure of conflicts of interest that could potentially affect the impartiality of a member or candidate's professional judgment. In this case, Ross's personal investment in a diversified mutual fund managed by his firm does not necessarily create a conflict of interest. Moreover, the CFA Code and Standards does not require the disclosure of such personal investments unless specifically required by the employer.

C is incorrect. Standard V(B) of the CFA Code and Standards pertains to the communication of investment information with clients and prospective clients. It requires members and candidates to communicate investment information fairly, accurately, and in a timely manner. In this case, Ross's personal investment in a diversified mutual fund managed by his firm does not violate this standard as it does not involve communication with clients or prospective clients.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.84 Keith Heath, CFA, works at Knowledge Investors Private Limited as an investment advisor. Heath used to maintain a website in which he regularly posted about his investment recommendations. Several years ago, Heath posted a buy recommendation about Yummy Educations Ltd. Several months later, that company was embroiled in tax-related fraud. Because of a career change, Heath has not updated his website for quite a while, and a few web pages still show a 'buy recommendation on the stock of Yummy Educations Limited. Has Heath *most likely* violated Standard I (C)?

A. Heath has not violated Standard I(C) – Misrepresentation.

B. Heath has violated Standard I(C) – Misrepresentation by not updating his website regularly.

C. Heath will not violate Standard I(C) – Misrepresentation if he updates his web pages today with a disclaimer that Yummy Educations Limited is no longer a 'buy' because of tax-related fraud.

Option B correctly identifies that Heath has violated Standard I(C) – Misrepresentation by not updating his website regularly. According to Standard I(C) – Misrepresentation, CFA members are required to not knowingly misrepresent information related to investment analysis, recommendations, or professional actions. This standard also specifies that members or candidates must regularly monitor and update websites maintained by them. In this case, Heath has failed to update his website regularly, which has led to outdated and potentially misleading information being available to the public. This is a clear violation of Standard I(C) – Misrepresentation, as it could lead to investors making decisions based on incorrect information.

A is incorrect. As explained above, Heath's failure to regularly update his website, leading to the availability of outdated and potentially misleading information, is a clear violation of this standard. It is important to understand that the standard requires members to not knowingly misrepresent information, and by failing to update his website, Heath is indirectly misrepresenting the current status of his investment recommendations.

C is incorrect. This option suggests that Heath will not violate Standard I(C) – Misrepresentation if he updates his web pages today with a disclaimer that Yummy Educations Limited is no longer a 'buy' because of tax-related fraud. While updating the website with a disclaimer is a step in the right direction, it does not absolve Heath of his previous violation. The standard requires regular monitoring and updating of websites, and Heath's failure to do so until now is a violation. Furthermore, the standard does not provide for retroactive compliance, meaning that a violation cannot be undone by subsequent actions.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.85 A fixed income trader observes that six-month Treasury bills are trading at lower prices than six-month Treasury STRIPS. He immediately starts buying and selling Treasury bills and STRIPS, respectively, with computer programs. The trader has *most likely*:

- A. Not violated Standard II(B) – Market Manipulation by carrying out the trades.
- B. Violated Standard II(B) – Market Manipulation by carrying out too many trades.
- C. Violated Standard II(B) – Market Manipulation by carrying out the trades with the help of a computer program.

The trader's actions are based on the observation of a market inefficiency, where six-month Treasury bills are trading at lower prices than six-month Treasury STRIPS. This discrepancy in prices presents an opportunity for arbitrage, where the trader can buy the undervalued Treasury bills and sell the overvalued Treasury STRIPS to make a profit. This is a common practice in financial markets and is not considered market manipulation. Market manipulation involves practices that distort prices or inflate trading volumes to mislead market participants, which is not the case here. The trader is simply taking advantage of a pricing inefficiency in the market, which is a legitimate trading strategy.

B is incorrect. The number of trades a trader executes does not constitute market manipulation. Market manipulation involves deceptive practices that distort market prices or inflate trading volumes to mislead other market participants. In this case, the trader is not engaging in any deceptive practices but is merely taking advantage of a pricing discrepancy in the market. Therefore, the number of trades executed is irrelevant to the question of market manipulation.

C is incorrect. Using a computer program to execute trades is a common practice in modern financial markets and does not constitute market manipulation. Market manipulation involves deceptive practices that distort market prices or inflate trading volumes to mislead other market participants. In this case, the trader is not engaging in any deceptive practices but is merely using a computer program to execute trades more efficiently. Therefore, the use of a computer program for trading does not constitute market manipulation.

CFA Level 1, Topic 10, Reading 71 - Guidance for Standards I-VII, LOS 71b: identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards;

Q.86 Logan Perkins, a CFA charter holder, and fund manager is presenting to prospective clients. At the end of the presentation, he makes the following comment: "I am pleased to inform you about my historical performance. Funds that I have managed have consistently outperformed the market and have generated average annual returns of 8% for the last 15 years. Though I can't predict specific numbers for the future, I can confidently say that with me at the helm; returns would hover between 6% and 12%." Logan has *most likely*:

- A. Violated Standard I(C) – Misrepresentation by highlighting his performance over the last 15 years.
- B. Violated Standard I(C) – Misrepresentation by quoting a specific range within which future returns would lie.
- C. Not violated Standard I(C) – Misrepresentation, as he correctly mentions that he cannot predict specific numbers for the future.

Option B is the correct answer because it accurately identifies Logan's violation of Standard I(C) – Misrepresentation. According to this standard, members or candidates are prohibited from guaranteeing future returns. This includes not only specific figures but also ranges of returns. In this case, Logan has quoted a specific range within which future returns would lie, which is a clear violation of the standard. Even though he has prefaced his statement by saying that he cannot predict specific numbers for the future, the fact that he has provided a range of returns is still considered a guarantee of future performance. This is a common misconception among finance professionals, and it's important to understand that any form of guarantee, whether it's a specific figure or a range, is considered a violation of Standard I(C) – Misrepresentation.

A is incorrect. Logan's statement about his historical performance, where he mentions that the funds he has managed have consistently outperformed the market and have generated average annual returns of 8% for the last 15 years, is not a violation of the standard. It's important to note that past performance is not indicative of future results, but it's not a violation to discuss past performance as long as it's done in a truthful and accurate manner.

C is incorrect. While it's true that Logan mentions that he cannot predict specific numbers for the future, this does not absolve him of his violation of Standard I(C) – Misrepresentation. As mentioned earlier, providing a range of returns is considered a guarantee of future performance, which is a violation of the standard. It's a common misconception that as long as specific numbers are not provided, it's not a violation, but this is not the case. Any form of guarantee, whether it's a specific figure or a range, is considered a violation.

CFA Level 1, Topic 10 - Ethics, Learning Module 3 - Guidance for Standards I-VII, LOS 3c: Identify conduct that conforms to the Code and Standards and conduct that violates the Code and Standards.

Q.87 Josh Packman manages accounts on behalf of several clients on the island of Murmania. Murmania does not have any policies on the frequency at which clients must be provided with statements showing the funds and securities in custody. Packman should *most likely* provide these statements:

- A. at least quarterly.
- B. at least semi-annually.
- C. at least annually.

Option A aligns with Standard III(A) – Loyalty, Prudence, and Care. This standard, as outlined by the CFA Institute, stipulates that in the absence of specific policies regarding the frequency at which clients must be provided with statements, a statement showing the funds and securities in custody should be provided to the clients at least quarterly. This is to ensure transparency and regular communication between the financial advisor and the client. Providing quarterly statements allows clients to stay informed about their investments and make timely decisions. It also allows the financial advisor to demonstrate their commitment to acting in the best interest of the client, thereby fostering trust and loyalty.

B is incorrect. Providing statements at least semi-annually, or twice a year, is not frequent enough to ensure transparency and regular communication. This could potentially leave clients uninformed about their investments for a significant period of time, which could lead to missed opportunities or increased risk. Furthermore, it does not align with the guidelines set out by Standard III(A) – Loyalty, Prudence, and Care, which recommends providing statements at least quarterly in the absence of specific policies.

C is incorrect. Providing statements at least annually, or once a year, is the least frequent option and therefore the least desirable. This would leave clients uninformed about their investments for an entire year, which is not conducive to effective decision-making or risk management. It also does not foster trust or loyalty, as it does not demonstrate a commitment to acting in the best interest of the client. Furthermore, it does not align with the guidelines set out by Standard III(A) – Loyalty, Prudence, and Care, which recommends providing statements at least quarterly in the absence of specific policies.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2c: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each Standard.

Q.88 Regarding the definition of the firm, which of the following is *least likely* an aspect of the definition concerning GIPS Standards requirements?

- A. Firms must revise aggregate results over some time.
- B. Firms must engage in investments or the managing of capital.
- C. Reporting of total firm assets must be the composite of the market value of all assets being managed by that organization

The Global Investment Performance Standards (GIPS) are a set of standardized, industry-wide ethical principles that guide investment firms on how to calculate and present their investment results to prospective clients. The GIPS standards are designed to be used globally with the goal of promoting transparency and comparability among investment firms. The question asks which of the given options is least likely an aspect of the definition concerning GIPS Standards requirements.

The GIPS standards do not require firms to revise aggregate results over some time. Instead, the standards emphasize the importance of consistency and continuity in the reporting of investment results. Firms are required to establish and maintain a complete history of performance that is compliant with the GIPS standards. This includes maintaining a record of all historical data and changes in methodology, and ensuring that all information is accurate and complete. The standards do not require or encourage firms to revise their aggregate results retrospectively. Instead, they require firms to correct any errors that they discover in their reported performance and to disclose the changes made.

B is incorrect. The GIPS standards do require firms to engage in investments or the management of capital. This is a fundamental aspect of the definition of a firm under the GIPS standards. The standards apply to firms that manage assets for the purpose of investment, including investment management companies, investment advisors, banks, insurance companies, and other organizations that manage assets on behalf of clients. The standards do not apply to firms that do not engage in investment management, such as consulting firms or financial planning firms.

C is incorrect. The GIPS standards do require the reporting of total firm assets to be the composite of the market value of all assets being managed by that organization. This requirement is part of the standards' emphasis on full disclosure and transparency. Firms are required to include all actual, fee-paying, discretionary portfolios in at least one composite, and to calculate composite performance by asset-weighting the individual portfolio returns. The total firm assets must include all assets managed by the firm, not just those included in the GIPS composites.

CFA Level 1, Topic 10 - Ethics, Learning Module 4 - Introduction to the Global Investment Performance Standards, LOS 4a: Describe the fundamentals of compliance, including the recommendations of the GIPS Standards with respect to the definition of the firm and the firm's definition of discretion.

Q.89 Which of the following statements is most likely correct regarding compliance with the GIPS standards?

- A. Obtaining verification is not mandatory.
- B. Compliance with the Code of Ethics and Standards of Professional Conduct is mandatory.
- C. The GIPS standards are comprehensive, addressing the unique characteristics of each asset class.

While GIPS strongly encourages firms to obtain verification of their compliance, it is not a compulsory requirement. Verification is a process by which a third party confirms that a firm has adhered to all the composite construction and disclosure requirements of the GIPS standards. However, the decision to undergo this process is left to the discretion of the firm. The purpose of verification is to provide existing and potential clients with assurance of the firm's compliance with the GIPS standards, but it does not guarantee the accuracy of any specific performance report. Therefore, while verification can enhance the credibility of a firm's claim of compliance, it is not a mandatory requirement under the GIPS standards.

B is incorrect. The GIPS standards are a set of standardized, industry-wide ethical principles that provide investment management firms with guidance on how to calculate and present their investment results to prospective clients. While the GIPS standards do promote ethical conduct in the investment industry, they do not specifically require firms to adhere to any particular Code of Ethics or Standards of Professional Conduct.

C is incorrect. While the GIPS standards do provide a comprehensive framework for the calculation and presentation of investment performance, they do not specifically address the unique characteristics of each asset class. The GIPS standards are designed to be applicable to all asset classes, and they provide general guidance that can be adapted to various types of investments. However, they do not provide detailed guidance on how to handle the specific characteristics of each individual asset class.

CFA Level 1, Topic 10 - Ethics, Learning Module 4 - Introduction to the Global Investment Performance Standards, LOS 4a: Explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is benefitted by the standards.

Q.90 Which of the following is *least likely* included in the code of ethics?

- A. Promote the integrity and viability of the global capital markets for the ultimate benefit of society.
- B. Maintain and improve professional competence and strive to maintain and improve the competence of other investment professionals.
- C. Deal fairly and objectively with all clients when providing investment analysis, making investment recommendations, or taking investment actions.

A code of ethics is a guide of principles designed to help professionals conduct business honestly and with integrity. While dealing fairly and objectively with clients is an important aspect of professional conduct, it is not a principle that is typically included in a code of ethics. Instead, this principle is more likely to be found in a professional conduct policy or a client service charter, which outlines the standards of service that clients can expect.

A is incorrect. This principle aligns with the ethical responsibility of finance professionals to act in a manner that promotes trust and confidence in the financial markets. This includes acting honestly, fairly, and in the best interests of their clients, and avoiding any actions that could harm the integrity of the markets. Therefore, this principle is typically included in a code of ethics.

B is incorrect. This principle reflects the ethical responsibility of finance professionals to maintain their professional knowledge and skills at a level that ensures they can provide a competent service to their clients. It also reflects their responsibility to contribute to the professional development of their colleagues and the profession as a whole. Therefore, this principle is typically included in a code of ethics.

CFA Level 1, Topic 10 - Ethics, Learning Module 2 - Code of Ethics and Standards of Professional Conduct, LOS 2b: Identify the six components of the Code of Ethics and Standards of Professional Conduct.
