Level I of the CFA® Exam

Mock Questions with Answers - Mock Exam 2025 #5 - First Session (Ethical and Professional Standards, Quantitative Methods, Economics & Financial Statement Analysis)

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Q.1 A financial risk manager has three routes to get to the office. The probability that she gets to the office on time using routes X, Y, and Z are 60%, 65%, and 70%. She does not have a preferred route and is therefore equally likely to choose any of the three routes. Given that she arrives to work on time, the probability that she chose route Z is *closest to:*

A. 0.36

B. 0.56

C. 0.52

Define X to be the event "chooses route X." Let Y and Z have similar definitions.

Define O to be the event that she arrives on time.

We wish to determine P(Z | O). Then:

$$\begin{aligned}
P(Z \mid O) &= \frac{(P(Z) \times P(O \mid Z))}{[P(Z) \times P(O \mid Z) + P(Y) \times P(O \mid Y) + P(X) \times P(O \mid X)]} \\
&= \frac{(\frac{1}{3} \times 0.7)}{[(\frac{1}{3} \times 0.7) + (\frac{1}{3} \times 0.65) + (\frac{1}{3} \times 0.6)]} \\
&= \frac{0.2333}{(0.2333 + 0.2167 + 0.2)} \\
&= 0.3589
\end{aligned}$$

B is incorrect. It excludes $(P(Z) \times P(O \mid Z))$ in the denominator so that:

$$P(Z \mid O) = \frac{0.2333}{(0.2167 + 0.2)} = 0.56$$

C is incorrect. It excludes $P(Y) \times P(O \mid Y)$ in the denominator so that:

$$P(Z \mid O) = \frac{0.2333}{(0.2333 + 0.2)} = 0.52$$

CFA Level 1, Quantitative Methods, Learning Module 4: Probability Trees and Conditional Expectations, LOS (c) Calculate and interpret an updated probability in an investment setting using Bayes' formula.

Q.2 A sampling method where each outcome has an equal chance of being selected, is *most accurately* referred to as:

A. random sampling.

B. systematic sampling.

C. sampling distribution.

Random sampling is a method where each member of a population has an equal chance of being selected. This method is often used in statistical studies where the goal is to gain insights about a larger population based on a smaller sample. The key characteristic of random sampling is its unbiased nature, which ensures that the sample represents the population accurately. This method is often used in surveys or experiments where it is impractical or impossible to study the entire population. The randomness of selection ensures that the sample is representative of the population, and the results obtained from the sample can be generalized to the population. This is why, when the question states that each outcome has an equal chance of being selected, it is referring to random sampling.

B is incorrect. Systematic sampling, unlike random sampling, does not give each member of the population an equal chance of being selected. Instead, it involves selecting elements at regular intervals, known as K. The interval K is determined using the formula $K = \frac{N}{n}$, where N is the population size and n is the sample size. While systematic sampling can be easier to implement than random sampling, it may introduce bias if there is a pattern in the population that corresponds to the sampling interval. Therefore, systematic sampling does not meet the criteria stated in the question, as it does not ensure that each outcome has an equal chance of being selected.

C is incorrect. A sampling distribution is not a method of sampling, but rather a concept in statistics. It refers to the probability distribution of a statistic based on a random sample. The sampling distribution provides information about the variability and shape of the distribution of the statistic. It is used to make inferences about the population parameter based on sample data. However, it does not involve the process of selecting samples where each outcome has an equal chance of being selected, and thus does not fit the description provided in the question.

CFA Level I, Topic 1 – Quantitative Methods, Learning Module 7 – Estimation and Inference, LOS 7a: Compare and contrast simple random, stratified random, cluster, convenience, and judgmental sampling and their implications for sampling error in an investment problem.

Q.3 There is a 40% chance that the economy keeps sinking into recession next year and a 60% chance that it will rebound. If the economy rebounds, Company ABC will hire 2,000 employees. If the economy keeps sinking, there is an 80% probability that it will cut 1,000 jobs and a 20% chance to go bankrupt and cut 9,000 jobs. The firm's expected job hires/cut is *closest to*:

A. -2,600 employees

B. +160 employees

C. +2,000 employees

There is a 60% chance that the economy will rebound. If this happens, the company will hire 2,000 employees. This scenario contributes to the expected job hires/cut by (0.6 * 2,000) = 1,200 employees.

On the other hand, there is a 40% chance that the economy will continue to sink into recession. In this case, there are two possible outcomes. There is an 80% probability that the company will cut 1,000 jobs, contributing (-0.8 * 1,000) = -800 to the expected job hires/cut. There is also a 20% chance that the company will go bankrupt and cut 9,000 jobs, contributing (-0.2 * 9,000) = -1,800 to the expected job hires/cut. Therefore, the total contribution from the recession scenario is 0.4 * (-800 -1,800) = -1,040.

Adding the contributions from the rebound and recession scenarios, we get the expected job hires/cut as (1,200 - 1,040) = +160 employees.

A is incorrect. This option suggests that the company will have a decrease of -2,600 employees. This calculation seems to be based on the assumption that the company will either cut 1,000 jobs with an 80% probability or go bankrupt and cut 9,000 jobs with a 20% probability, without considering the 60% chance that the economy will rebound and the company will hire 2,000 employees. This is a misinterpretation of the question as it does not take into account all possible scenarios.

C is incorrect. This option suggests that the company will hire 2,000 employees. This calculation seems to be based on the assumption that the economy will definitely rebound, which is not the case as there is only a 60% chance of this happening. This option does not consider the 40% chance that the economy will continue to sink into recession and the company may cut jobs or even go bankrupt. Therefore, this option is not a correct interpretation of the question.

CFA Level 1, Topic 1, Reading 4– Common Probability Distributions, LOS 4e: describe the properties of a Bernoulli random variable and a binomial random variable, and calculate and interpret probabilities given the binomial distribution function.

Q.4 A portfolio manager compares the performance of a client’s portfolio before and after the inclusion of real estate. He has compiled relevant data in a table. He aims to analyze whether the variance of quarterly returns has changed significantly between the two periods. He collects data five years before and five years after the inclusion.

	N	Mean Quarterly Returns (%)	Variance of Returns
Before inclusion	20	2.584	225
After inclusion	20	1.821	151

Using a 2.1555 rejection point, the manager will *most likely* conclude that the inclusion of real estate:

A. significantly alters portfolio performance.

B. does not significantly alter portfolio performance.

C. has an indeterminate effect on portfolio performance.

The question is about the impact of the inclusion of real estate on the performance of a portfolio. The portfolio manager has collected data for five years before and after the inclusion of real estate and has calculated the mean and variance of quarterly returns for both periods. The null hypothesis for this analysis is that the variance of returns is the same before and after the inclusion of real estate ($\sigma_1^2 = \sigma_2^2$), while the alternate hypothesis is that the variances are not equal.

The manager uses an F-test to test this hypothesis. The F-test is a statistical test that compares the variances of two populations. In this case, the two populations are the returns of the portfolio before and after the inclusion of real estate. The F-test statistic is calculated by dividing the larger variance by the smaller one. In this case, the variance before the inclusion of real estate (225) is larger than the variance after the inclusion (151), so it is used in the numerator of the F-test statistic.

The F-test statistic is calculated as follows:

$$F = \frac{s_1^2}{s_2^2} = \frac{225}{151} = 1.49$$

The calculated F-statistic value (1.49) is lower than the rejection point (2.1555). This means that the observed difference in variances could have happened by chance, and we do not have enough evidence to reject the null hypothesis. Therefore, we conclude that the inclusion of real estate does not significantly alter the variance of portfolio returns.

A is incorrect. The statement that the inclusion of real estate significantly alters portfolio performance is not supported by the data. The F-test statistic is lower than the rejection point, which means that we do not have enough evidence to reject the null hypothesis that the variances of returns are the same before and after the inclusion of real estate. Therefore, we cannot conclude that the inclusion of real estate significantly alters portfolio performance.

C is incorrect. The effect of the inclusion of real estate on portfolio performance is not indeterminate. The F-test provides a clear result: the variance of returns does not significantly change after the inclusion of real estate. Therefore, we can conclude that the inclusion of real estate does not have an indeterminate effect on portfolio performance.

CFA Level I, Topic 1 – Quantitative Methods, Learning Module 8 – Hypothesis Testing, LOS 8a: Explain hypothesis testing and its components, including statistical significance, Type I and Type II errors, and the power of a test.

Q.5 Bob McAllen, 58 years old, is on the verge of retiring. He owns a savings account amounting to $1,250,000 that returns an average of 7% per year. Life expectancy for 58-year older men is estimated at 25 more years. Considering that he uses this information alone to plan his retirement, the amount that Mr. McAllen can take out of his account every year in living expenses for the rest of his expected life is *closest to;*

A. $68,237.98

B. $75,256.33

C. $107,263.15

The question is asking for the annual annuity payment that Mr. McAllen can withdraw from his savings account over the next 25 years, given a 7% annual return. This calculation can be performed using a financial calculator, such as the BAII Plus Pro calculator. The inputs for this calculation are:

- **N** (number of periods) = 25 years
- **I/Y** (interest rate per year) = 7%
- **PV** (present value of the account) = \$1,250,000
- **FV** (future value of the account) = 0 (since the account will be depleted after 25 years)

After inputting these values into the financial calculator, it will compute the PMT (payment per period), which represents the amount that Mr. McAllen can withdraw annually. The result of this calculation is:

$$\text{PMT} = -107,263.15$$

The negative sign indicates a cash outflow from the account, meaning it is the annual withdrawal Mr. McAllen can make. Therefore, Mr. McAllen can withdraw approximately \$107,263.15 from his account each year for the next 25 years.

A is incorrect. The amount of $68,237.98 is too low. This would be the annual withdrawal amount if the interest rate was lower or the number of periods was higher. However, given the 7% interest rate and the 25-year period, the annual withdrawal amount is higher. Therefore, option A is not the correct answer.

B is incorrect. The amount of $75,256.33 is also too low. This would be the annual withdrawal amount if the interest rate was slightly lower or the number of periods was slightly higher. However, given the 7% interest rate and the 25-year period, the annual withdrawal amount is higher. Therefore, option B is not the correct answer.

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.6 Which of the following tests is *most appropriately* used to assess the linear relationship between the ranks of two variables within their sample when the sample data is not normally distributed?

A. Parametric tests.

B. Correlation coefficients.

C. Spearman rank correlation tests.

The Spearman rank correlation test, as indicated in option C, is the most appropriate test to assess the linear relationship between the ranks of two variables within their sample when the sample data is not normally distributed. This is because the Spearman rank correlation test does not make any assumptions about the distribution of the data. It is a non-parametric test that measures the strength and direction of the association between two ranked variables. It is particularly useful when the data does not meet the assumptions required for a Pearson's correlation, such as when the data is not normally distributed. The Spearman rank correlation test is based on the ranked values of the data rather than the data itself, making it a robust measure of a monotonic relationship.

A is incorrect. Parametric tests, as mentioned in option A, are statistical tests that require analysts to make assumptions regarding the distribution of the population. These tests are based on parameters such as the mean and standard deviation, and they assume that the data follows a specific distribution, usually a normal distribution. However, in this case, the data is not normally distributed, which makes parametric tests inappropriate. Parametric tests are less robust than non-parametric tests like the Spearman rank correlation test when these assumptions are not met.

B is incorrect. Correlation coefficients, as stated in option B, are simply a measure (between -1 and 1) of the strength of the relationship between two variables. They do not specifically assess the linear relationship between the ranks of two variables, and they do not take into account the distribution of the data. Correlation coefficients are more general measures of association and do not provide the specific information that a Spearman rank correlation test would provide in this scenario. Furthermore, correlation coefficients require the data to be normally distributed, which is not the case in this scenario.

CFA Level 1, Topic 1- Quantitative Methods, Learning Module 9 – Parametric and nonparametric 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.7 The standard error of a sample mean is 0.59, the sample size is 30, and the mean is 13.50. If the population follows a normal distribution, the standard deviation of the population is *closest to*:

A. 0.11

B. 2.46

C. 3.23

$$\text{Standard error of sample mean} = \frac{\sigma}{\sqrt{n}}$$

Where σ represents the standard deviation of the population and n represents the sample size. In this case, the standard error of the sample mean is given as 0.59, and the sample size is given as 30. By rearranging the formula, we can solve for σ:

$$\Rightarrow \sigma = \text{Standard error of sample mean} \times \sqrt{n} = 0.59 \times 30^{\frac{1}{2}} = 3.23$$

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.8 Chris White has a portfolio that consists of 75% equities and 25% bonds. Equities are expected to return 18% and bonds' expected return is 9%. If the correlation between equities and bonds is 30%, then White's portfolio return is *closest to*:

A. 11.25%.

B. 15.30%.

C. 15.75%.

In this case, the portfolio consists of 75% equities and 25% bonds. The expected return of equities is 18% and the expected return of bonds is 9%. The correlation between equities and bonds is not relevant in this calculation because it does not affect the expected return of the portfolio. The expected return of the portfolio is calculated as follows:

Portfolio return = (Weight of equities x Expected return of equities) + (Weight of bonds x Expected return of bonds) = (0.75 x 0.18) + (0.25 x 0.09) = 0.1350 + 0.0225 = 0.1575 or 15.75%

A is incorrect. This option suggests a portfolio return of 11.25%, which would be the case if the weights of the equities and bonds were swapped. However, in the given problem, the weight of equities is 75% and the weight of bonds is 25%. Therefore, the calculation of the portfolio return based on these weights results in a return of 15.75%, not 11.25%.

B is incorrect. This option suggests a portfolio return of 15.30%, which seems to consider the correlation between the equities and bonds in the calculation. However, the correlation between the assets in a portfolio does not affect the expected return of the portfolio. The expected return of a portfolio is simply the weighted average of the expected returns of the individual assets in the portfolio. Therefore, the correct portfolio return is 15.75%, not 15.30%.

CFA Level 1, Topic 1 – Quantitative Methods, Learning Module 5 – Portfolio Mathematics, LOS 5a: Calculate and interpret the expected value, variance, standard deviation, covariances, and correlations of portfolio returns.

Q.9 The appropriate test statistic for a test of the equality of variances based on two independent random samples is the:

A. F-test.

B. t-test.

C. Chi-squared test.

The F-test specifically designed to test the equality of variances based on two independent random samples. The F-test is a statistical test that is used to determine if two populations have the same variance. It does this by comparing the ratio of two variances. If the variances are equal, the ratio of the variances will be close to 1. If the variances are not equal, the ratio will deviate from 1. The F-test is a powerful tool in statistical analysis and is widely used in fields such as finance, economics, and biology.

While the statement is correct that the F-test is used to test the equality of variances, it is important to note that this is not the only use of the F-test. The F-test is also used in the analysis of variance (ANOVA), which is a statistical method used to test differences between two or more means. ANOVA uses the F-test to statistically assess the equality of means when you have three or more groups. Therefore, while the F-test is used to test the equality of variances, it is not limited to this use.

B is incorrect. The t-test is a statistical test that is used to determine if there is a significant difference between the means of two groups. While the t-test can be used to compare the means of two independent samples, it is not the appropriate test to use when testing the equality of variances. The t-test assumes that the variances of the two populations are equal. Therefore, if the variances are not equal, the results of the t-test may be inaccurate.

C is incorrect. The Chi-square test is a statistical test that is used to determine if there is a significant difference between the observed frequencies in a categorical dataset and the expected frequencies. The Chi-square test is not used to test the equality of variances. Instead, it is used to test the independence of two categorical variables. Therefore, the Chi-square test would not be the appropriate test to use when testing the equality of variances based on two independent random samples.

CFA Level 1, Topic 1 – Quantitative Methods, Learning Module 8 – Hypothesis Testing, LOS 8a: Explain hypothesis testing and its components, including statistical significance, Type I and Type II errors, and the power of a test.

Q.10 Which of the following is *least likely* a method that an investor uses to assess geopolitical risk?

A. Velocity of its impact

B. Likelihood of its occurrence.

C. Recurrent nature of its impact.

The recurrent nature of the impact of political risk is not a method that investors typically use in its assessment. Instead, investors tend to focus on three key areas when considering geopolitical risk: the likelihood of its occurrence, the velocity of its impact, and the size and nature of that impact. The recurrence of a risk's impact is not typically a factor that is considered, as it does not provide a clear indication of the potential severity or implications of the risk. Instead, investors are more interested in understanding the potential impact of a risk, how quickly it could affect their investments, and how likely it is to occur.

A is incorrect. The velocity of a risk's impact is indeed an aspect that investors consider when they are assessing geopolitical risk. This refers to the pace at which a risk impacts an investor's portfolio. In the short term, volatility may affect entire markets, while in the medium term, risks may impact specific sectors. Therefore, the velocity of its impact is a crucial factor in assessing geopolitical risk, making option A an incorrect answer.

B is incorrect. The likelihood of the occurrence of risk is another area that investors need to assess when they are considering geopolitical risk. The highly unpredictable nature of many risks means this can be more of an art than a science. However, understanding the likelihood of a risk occurring can help investors to prepare and potentially mitigate some of the potential impacts. Therefore, the likelihood of its occurrence is a key factor in assessing geopolitical risk, making option B an incorrect answer.

CFA Level I, Topic 1 – Economics, Learning Module 5 – Introduction to Geopolitics, LOS 5f: Describe the impact of geopolitical risk on investments.

Q.11 A Type 1 error is made when:

A. The null hypothesis is rejected when it shouldn’t be rejected.

B. The alternative hypothesis is rejected when it should be rejected.

C. The null hypothesis is accepted when it should be rejected.

In statistical hypothesis testing, a Type 1 error is made when the null hypothesis is rejected when it shouldn't be. This means that we have found evidence to suggest that our hypothesis is false, when in fact it is true. This can occur due to various reasons such as sampling error, measurement error, or even due to the inherent randomness in the data. This is a serious error as it leads to false positives, where we believe we have found a significant result when in fact there is none. This can lead to incorrect conclusions and decisions based on those conclusions. Therefore, it is crucial to minimize the chances of making a Type 1 error in any statistical analysis.

B is incorrect. The statement describes a Type 2 error, not a Type 1 error. A Type 2 error is made when the alternative hypothesis is rejected when it should be accepted. This means that we fail to reject the null hypothesis when it is false. This is also a serious error as it leads to false negatives, where we fail to detect a significant result when there is one. This can lead to missed opportunities and incorrect conclusions.

C is incorrect. As mentioned above, a Type 2 error is made when the null hypothesis is accepted when it should be rejected. This can occur due to various reasons such as insufficient sample size, lack of power in the statistical test, or even due to the inherent randomness in the data.

CFA Level 1, Topic 1- Quantitative Methods, Learning Module 8 – Hypothesis Testing, LOS 8a: Explain hypothesis testing and its components, including statistical significance, Type I and Type II errors, and the power of a test.

Q.12 Consider the following information.

- Portfolio A’s variance of return: 45
- Portfolio B’s variance of return: 42
- Correlation of returns: 0.48

The covariance of returns between portfolios A and B is *closest to:*

A. 20.87

B. 90.57

C. 91.02

The covariance between two portfolios is calculated using the following formula:

$$\text{Cov}(R_A, R_B) = \rho(R_A, R_B) \times \sigma(R_A) \times \sigma(R_B)$$

Where:

- $\rho(R_A, R_B)$ is the correlation of returns between portfolios A and B, given as 0.48,
- $\sigma(R_A)$ is the standard deviation of returns for portfolio A,
- $\sigma(R_B)$ is the standard deviation of returns for portfolio B.

The variance of returns for portfolio A is 45, and the variance of returns for portfolio B is 42. The standard deviation is the square root of the variance:

$$\sigma(R_A) = \sqrt{45} \approx 6.71$$

$$\sigma(R_B) = \sqrt{42} \approx 6.48$$

Now, substituting the values into the covariance formula:

$$\text{Cov}(R_A, R_B) = 0.48 \times 6.71 \times 6.48$$

Calculating the result:

$$\text{Cov}(R_A, R_B) \approx 20.87$$

B is incorrect. This option suggests that the covariance of returns between portfolios A and B is closest to 90.57. However, using the formula for covariance and the given values, we find that the covariance is actually 20.87. The value of 90.57 may have been obtained by incorrectly calculating the standard deviations or the correlation of returns. It's important to remember that the standard deviation is the square root of the variance, not the variance itself, and that the correlation of returns is a value between -1 and 1 that measures the degree to which the returns on two portfolios move in relation to each other.

C is incorrect. This option suggests that the covariance of returns between portfolios A and B is closest to 91.02. However, using the formula for covariance and the given values, we find that the covariance is actually 20.87. The value of 91.02 may have been obtained by incorrectly calculating the standard deviations or the correlation of returns. It's important to remember that the standard deviation is the square root of the variance, not the variance itself, and that the correlation of returns is a value between -1 and 1 that measures the degree to which the returns on two portfolios move in relation to each other.

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.13 From a population of 10,000, a researcher chooses a sample of 1,000 observations. If the population's standard deviation is 100, the standard error of the sample mean is *closest to*:

A. 0.1

B. 3.16

C. 2.76

The standard error of the sample mean is calculated using the following formula:

$$\text{Standard Error} = \frac{\sigma}{\sqrt{n}}$$

Where:

- σ is the standard deviation of the population, given as 100,
- n is the sample size, given as 1,000.

Substituting the values into the formula:

$$\text{Standard Error} = \frac{100}{\sqrt{1,000}}$$

First, calculate the square root of 1,000:

$$\sqrt{1,000} \approx 31.6228$$

Now, calculate the standard error:

$$\text{Standard Error} = \frac{100}{31.6228} \approx 3.16228$$

This value is closest to option B, 3.16. The standard error measures the dispersion of the sample mean from the population mean. A smaller standard error indicates a more precise estimation of the population mean, and in this case, the value of 3.16 suggests a relatively precise estimation given the large sample size of 1,000.

A is incorrect. A standard error of 0.1 would suggest an extremely precise estimation of the population mean, which is not possible given the standard deviation of 100 and the sample size of 1,000. The standard error is directly influenced by the standard deviation and inversely influenced by the sample size. Therefore, a larger standard deviation or a smaller sample size would result in a larger standard error. In this case, the standard deviation of 100 is relatively large, which would result in a larger standard error. Therefore, a standard error of 0.1 is not feasible in this scenario.

C is incorrect. A standard error of 2.76 would suggest a less precise estimation of the population mean compared to the actual standard error of 3.16. The standard error is directly influenced by the standard deviation and inversely influenced by the sample size. Therefore, a larger standard deviation or a smaller sample size would result in a larger standard error. In this case, the standard deviation of 100 and the sample size of 1,000 result in a standard error of 3.16, which is larger than 2.76. Therefore, a standard error of 2.76 is not feasible in this scenario.

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.14 Chris McKay has a portfolio that consists of 75% equities and 25% bonds. Equities should return 18%, and bonds return 9%. The correlation between equities and bonds is 30%. If McKay's strategy related to the bonds consists of keeping them until maturity, his portfolio's rate of return is *closest to*:

A. 14.85%

B. 15.30%

C. 15.75%

The expected return of a portfolio is the weighted average of the expected returns of the individual assets in the portfolio. In this case, the portfolio consists of 75% equities and 25% bonds. The expected return of the equities is 18%, and the expected return of the bonds is 9%. Therefore, the expected return of the portfolio is (0.75 * 0.18) + (0.25 * 0.09) = 0.1350 + 0.0225 = 0.1575 or 15.75%. This calculation assumes that the returns of the equities and bonds are independent of each other, which is a reasonable assumption given that the correlation between them is only 30%. This means that the returns of the equities and bonds are not perfectly correlated, and therefore, the return of the portfolio is not simply the average of the returns of the equities and bonds. Instead, it is a weighted average that takes into account the proportion of the portfolio invested in each asset.

A is incorrect. A return of 14.85% would be too low given the expected returns of the equities and bonds and their respective weights in the portfolio. Even if the returns of the equities and bonds were perfectly negatively correlated, which is not the case here, the return of the portfolio would still be higher than 14.85%. This is because the return of the portfolio is a weighted average of the returns of the equities and bonds, and the weights are based on the proportion of the portfolio invested in each asset, not on their correlation.

B is incorrect. A return of 15.30% would also be too low given the expected returns of the equities and bonds and their respective weights in the portfolio. This return would imply that the returns of the equities and bonds are more negatively correlated than they actually are, which would result in a lower portfolio return. However, the correlation between the returns of the equities and bonds is only 30%, which means that they are not perfectly negatively correlated, and therefore, the return of the portfolio is not simply the average of the returns of the equities and bonds, but a weighted average that takes into account the proportion of the portfolio invested in each asset.

CFA Level 1, Topic 1 – Quantitative Methods, Learning Module 4 – Probability Trees and Conditional Expectations, LOS 4a: Calculate expected values, variances, and standard deviations and demonstrate their application to investment problems.

Q.15 Consider a 30-year annuity with the first annual payment of $120,000 starting today, assuming an interest rate of 6% per year compounded annually; the present value of this annuity is *closest* to:

A. $1,510,886.50

B. \$1,630,886.50

C. \$1,750,886.50

The annuity in question is an annuity due, meaning that the payments are made at the beginning of each period. The first payment of \$120,000 is made today, and the remaining payments are made annually for the next 29 years.

To calculate the present value of an annuity due, we can break it down into two parts:

- The immediate payment made today, which has a present value of \$120,000 since it is made immediately.
- The present value of the ordinary annuity payments made over the next 29 years.

The formula for the present value of an ordinary annuity is:

$$PV = A \times \left[\frac{1-(1+r)^{-N}}{r}\right]$$

Where:

- A is the annuity payment (\$120,000),
- r is the interest rate (6% or 0.06),
- N is the number of periods (29 years).

Substituting the given values into the formula:

$$PV = 120{,}000 \times \left[\frac{1-(1+0.06)^{-29}}{0.06}\right]$$

Calculating the present value of the ordinary annuity:

$$PV \approx 120{,}000 \times 13.5907 \approx 1{,}630{,}886.50$$

The present value of the immediate payment made today is \$120,000. Therefore, the total present value of the annuity due is the sum of the present value of the immediate payment and the present value of the ordinary annuity:

$$\text{Total PV} = 120{,}000 + 1{,}630{,}886.50 = 1{,}750{,}886.50$$

A is incorrect. This option suggests that the present value of the annuity is \$1,510,886.50.

However, this does not take into account the immediate payment of $120,000 made today. If we were to subtract this amount from the total present value calculated above, we would get a value of $1,630,886.50, which is still higher than the value suggested by this option. Therefore, option A underestimates the present value of the annuity due.

B is incorrect. This option suggests that the present value of the annuity is $1,630,886.50. While this is the correct present value of the ordinary annuity payments made over the next 29 years, it does not include the immediate payment of $120,000 made today. Including this payment increases the total present value of the annuity due to $1,750,886.50, which is higher than the value suggested by this option. Therefore, option B also underestimates the present value of the annuity due.

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.16 A random sample of 50 CFA exam candidates were found to have an average IQ of 125. The standard deviation among candidates is known (approximately 20). Assuming that IQs follow a normal distribution, carry out a statistical test (5% significance level) to determine whether the average IQ of CFA candidates is greater than 120. Compute the test statistic and give a conclusion.

A. Test statistic: 1.768; Reject H_0.

B. Test statistic: 1.768; Fail to reject H_0.

C. Test statistic: 1.0606; Fail to reject H_0.

The first step is to formulate the null hypothesis (H_0) and the alternative hypothesis (H_1). In this case, the null hypothesis is that the average IQ is less than or equal to 120 (H_0: $\mu \leq 120$), and the alternative hypothesis is that the average IQ is greater than 120 (H_1: $\mu > 120$).

This is a one-sided test because the alternative hypothesis explores a change in one direction only. Under the null hypothesis, the test statistic follows a normal distribution with mean 0 and standard deviation 1. The test statistic is calculated as $(\bar{x} - 120) / (\sigma/\sqrt{n})$, where $\bar{x}$ is the sample mean, σ is the standard deviation, and n is the sample size. In this case, the test statistic is $(125 – 120) / (20/\sqrt{50}) = 1.768$.

The critical value for a 5% significance level is the upper 5% point of the normal distribution, which is 1.6449. Since the calculated test statistic (1.768) is greater than the critical value, it lies in the rejection region. This means that we have sufficient evidence to reject the null hypothesis and conclude that the average IQ of CFA candidates is indeed greater than 120.

Another approach to reach the same conclusion is through the p-value. The p-value is the probability of observing a test statistic as extreme as the one calculated, given that the null hypothesis is true. In this case, the p-value is $P(Z > 1.768) = 1- P(Z < 1.768) = 1 - 0.96147 = 0.03853$ or 3.853%. Since this probability is less than 5%, we have sufficient evidence to reject the null hypothesis.

B is incorrect. This option suggests that we fail to reject the null hypothesis. However, as explained above, the calculated test statistic is greater than the critical value, and the p-value is less than the significance level. Both of these facts provide sufficient evidence to reject the null hypothesis and conclude that the average IQ of CFA candidates is greater than 120.

C is incorrect. This option provides a different test statistic (1.0606), which is less than the critical value. If this were the correct test statistic, we would fail to reject the null hypothesis. However, the correct test statistic, as calculated above, is 1.768, which provides sufficient evidence to reject the null hypothesis.

CFA Level 1, Topic 1 – Quantitative Methods, Learning Module 8 – Hypothesis Testing, LOS 8a: Explain hypothesis testing and its components, including statistical significance, Type I and Type II errors, and the power of a test.

Q.17 Janice Mackintosh is performing statistical analysis on the equity market of Algeria. She is attempting to predict the effects of a recent technology regulation on the forecasted EPS of software houses. She collects financial data concerning 40 software houses. Mackintosh calculates sample mean and sample standard deviation of \$33.05 and \$0.1185, respectively. Based on her collected sample, she forecasts that the EPS value is expected to equal \$35.2. Based on the data collected and using the central limit theorem, the standard error of the sample mean is *closest* to:

A. 0.0087

B. 0.0187

C. 0.1185

The central limit theorem is a fundamental concept in statistics that states that given a sufficiently large sample size, the sampling distribution of the mean for a variable will approximate a normal distribution, regardless of that variable's distribution in the population. This theorem is the foundation for many statistical procedures, including the calculation of confidence intervals and hypothesis testing.

The standard error of the sample mean is a measure of the dispersion of the sample mean from the population mean. It is calculated as the standard deviation of the population divided by the square root of the sample size. In cases where the population standard deviation is unknown, as in this case, the sample standard deviation can be used as an estimate. The formula for the standard error of the sample mean is:

$$\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}}$$

Substituting the given values into the formula, we get:

$$s_{\overline{(x)}} = \frac{s}{\sqrt{n}} = \frac{0.1185}{\sqrt{40}} = 0.01873$$

This value is closest to 0.0187, which is option B.

A is incorrect. This option suggests that the standard error of the sample mean is 0.0087. However, using the formula for the standard error of the sample mean and substituting the given values, we get a value of 0.01873, which is closest to 0.0187, not 0.0087.

C is incorrect. This option suggests that the standard error of the sample mean is 0.1185. However, this is the value of the sample standard deviation, not the standard error of the sample mean. The standard error of the sample mean is calculated as the standard deviation divided by the square root of the sample size, which gives a value of 0.01873, not 0.1185.

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.18 The use of concentration ratios to estimate whether a potential merger should be blocked due to the potential of increasing monopolistic behavior:

A. may overstate the risk if there are low barriers to entry.

B. may overstate the risk if the industry is too broadly defined.

C. may understate the risk if the products are highly differentiated.

Concentration ratios are used to measure the market share of the largest firms within an industry and are often used to assess the level of competition. A high concentration ratio might suggest a monopolistic market. However, if the industry has low barriers to entry, this means new competitors can easily enter the market, increasing competition and reducing the risk of monopolistic behavior. In industries where entering the market is relatively easy and cost-effective, the concentration ratio may overstate the risk of monopolistic outcomes following a merger. This is because the ease of entry for new firms can counterbalance the market power of the merged entity, ensuring that competition remains healthy. Therefore, using concentration ratios to evaluate the potential monopolistic impact of a merger can be misleading if there are low barriers to entry in the industry.

B is incorrect. The statement that concentration ratios may overstate the risk if the industry is too broadly defined overlooks the fact that a broad definition of an industry could actually dilute the perceived market power of any single firm or a group of firms. When an industry is defined too broadly, it includes a wider range of products or services, some of which may not be direct substitutes. This can lead to an underestimation of the concentration ratio, as it spreads the market share across a larger number of firms, potentially masking the market power of the most dominant firms. Therefore, while defining the industry too broadly can affect the accuracy of concentration ratios, it is more likely to understate rather than overstate the risk of monopolistic behavior.

C is incorrect. The statement that concentration ratios may understate the risk if the products are highly differentiated is incorrect. In markets where products are highly differentiated, each product is unique and preferred by consumers for its unique features or qualities. In such cases, concentration ratios, which focus on market share, may not fully capture the extent of market power held by firms with highly differentiated products. Therefore, the risk of monopolistic behavior may be understated in such scenarios.

CFA Level 1, Topic 1- Economics, Learning Module 1 - Firms and Market Structures, LOS 1e: identify the type of market structure within which a firm operates and describe the use and limitations of concentration measures.

Q.19 The process of interactions and integration among people, companies, and governments worldwide is *most likely* referred to as:

A. Cooperation.

B. Globalization.

C. Standardization.

Globalization refers to the process of interaction and integration among people, companies, and governments worldwide. This process is characterized by the spread of products, technology, information, jobs, and culture across national borders. It involves the interconnection of global markets and businesses. This process has been facilitated by advancements in technology, transportation, and communication infrastructure, enabling businesses to operate and compete on a global scale. It has led to increased economic integration and interdependence among countries. Globalization has significant implications for various aspects of life, including economic development, environmental issues, cultural exchange, and political systems.

A is incorrect. While cooperation is indeed a process by which entities, such as countries or companies, work together towards the realization of a shared goal or purpose, it does not encompass the breadth and depth of interactions and integrations that globalization does. Cooperation can occur on a smaller scale, such as between two companies or two countries, and does not necessarily involve the spread of products, information, jobs, and culture across borders. Furthermore, cooperation is often focused on specific goals or projects, whereas globalization is a broader, ongoing process that affects many aspects of life and business.

C is incorrect. Standardization refers to the process of creating and implementing technical standards. These standards can be used to ensure that products, services, and processes are safe, reliable, and of good quality. They can also help to facilitate trade and communication between countries and companies. However, standardization does not involve the same level of interaction and integration among people, companies, and governments worldwide as globalization does. While standardization can be a part of globalization, it is not synonymous with it. Standardization is more about creating uniformity and consistency, whereas globalization involves a complex web of interactions and integrations across various domains.

CFA Level 1, Topic 2 – Economics, Learning Module 5 – Introduction to Geopolitics, LOS 5b: Describe geopolitics and its relationship with globalization.

Q.20 If the currency exchange rate between the U.S.A. and Europe is 1.11 USD/EUR, and the rates between the U.A.E. and the U.S.A. is 3.30 AED/USD, then the current exchange rate of AED per EUR is *closest* to:

A. 2.97

B. 3.30

C. 3.66

Cross rates are used to calculate the exchange rate between two currencies by using a third currency, in this case, the U.S. dollar (USD). The given exchange rates are 1.11 USD/EUR (U.S. dollars per Euro) and 3.30 AED/USD (UAE Dirhams per U.S. dollar). To find the exchange rate of AED per EUR, we need to eliminate the U.S. dollar from the equation. This is done by cross-multiplying the given exchange rates. The calculation is as follows: (1.11 USD/EUR) x (3.30 AED/USD) = 3.66 AED/EUR. Therefore, the exchange rate of AED per EUR is closest to 3.66.

A is incorrect. This option suggests that the exchange rate of AED per EUR is 2.97. However, this is not accurate as it does not correctly apply the concept of cross rates. Cross rates require the multiplication of the given exchange rates, not a simple conversion or average. Therefore, the calculation (1.11 USD/EUR) x (3.30 AED/USD) does not equal 2.97 AED/EUR, making this option incorrect.

B is incorrect. This option suggests that the exchange rate of AED per EUR is 3.30. This is incorrect as it seems to assume that the exchange rate between the U.A.E. and the U.S.A. is the same as the exchange rate between the U.A.E. and Europe. However, this is not the case. The exchange rate between two different currency pairs cannot be assumed to be the same. The correct exchange rate is calculated using the cross rates method, which gives a result of 3.66 AED/EUR, not 3.30 AED/EUR.

CFA Level 1, Topic 2 – Economics, Learning Module 8 – Exchange Rate Calculations, LOS 8a: Calculate and interpret currency cross-rates.

Q.21 An expansionary fiscal policy may *most likely* include:

A. Reductions in government expenditures and reductions in taxes.

B. Increases in government expenditures and increases in tax credits.

C. Reductions in interest rates and Increases in government expenditures.

Option B includes two key components of an expansionary fiscal policy: increases in government expenditures and increases in tax credits. Government expenditures are a crucial part of aggregate demand. When the government increases its spending, it directly injects money into the economy, which can stimulate economic activity and growth. This is because the increased government spending creates jobs, increases income, and boosts consumer spending, all of which contribute to a shift in aggregate demand to the right.

Furthermore, tax credits are a powerful tool for stimulating economic activity. Unlike tax deductions, which only reduce the amount of income that is subject to taxation, tax credits directly reduce the amount of tax that individuals and businesses owe to the government. This means that people and companies have more money left over after paying their taxes, which they can then spend or invest in the economy. This increase in spending or investment can also contribute to a shift in aggregate demand to the right, further stimulating economic growth. Therefore, an expansionary fiscal policy is most likely to include increases in government expenditures and increases in tax credits, as stated in option B.

A is incorrect. It suggests that an expansionary fiscal policy may include reductions in government expenditures and reductions in taxes. However, this is not accurate. Reductions in government expenditures are a characteristic of contractionary fiscal policy, not expansionary fiscal policy. When the government reduces its spending, it is withdrawing money from the economy, which can slow economic activity and growth. This is the opposite of what an expansionary fiscal policy aims to achieve.

C is incorrect. It suggests that an expansionary fiscal policy may include reductions in interest rates and increases in government expenditures. While it is true that increases in government expenditures are a component of expansionary fiscal policy, reductions in interest rates are not. Interest rates are a tool of monetary policy, not fiscal policy. Fiscal policy involves the government changing tax rates and levels of government spending to influence aggregate demand in the economy. Monetary policy, on the other hand, involves the central bank changing interest rates to influence the supply of money in the economy.

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.22 Currently, the USD/GBP spot rate is 1.6736, while the three-month USD/GBP forward rate is 1.6745. Which of the following is the *best* interpretation of the forward discount/premium?

A. The interest rates in the United States are higher than those in Great Britain.

B. The real value of the USD/GBP spot rate will appreciate in the next 90 days.

C. The interest rates in Great Britain are higher than those in the United States.

The correct interpretation of the forward discount/premium in this scenario is that the interest rates in the United States are higher than those in Great Britain. This is evident from the fact that the GBP is selling at a forward premium of 0.009 (calculated as 1.6745 – 1.6736). In the context of foreign exchange markets, a forward premium is a situation where the forward or expected future price for a currency is more than the spot price. It is an indication of a higher interest rate in the foreign country (in this case, the United States) compared to the base country (in this case, Great Britain).

The forward premium of 0.009 indicates that the interest rates in the United States are higher than those in Great Britain. This is because when the interest rates are higher in a country, investors would want to invest in that country to gain higher returns. This increases the demand for that country's currency, thereby increasing its value. Hence, the USD is expected to be stronger in the future (as indicated by the forward rate), implying that the interest rates in the United States are higher than those in Great Britain.

B is incorrect. The statement that the real value of the USD/GBP spot rate will appreciate in the next 90 days is not necessarily true based on the given information. The forward rate is merely an expectation or an agreement of what the exchange rate will be in the future. It does not guarantee that the spot rate will appreciate or depreciate. The actual movement of the spot rate will depend on various other factors such as changes in interest rates, inflation rates, political stability, economic performance, etc.

C is incorrect. The statement that the interest rates in Great Britain are higher than those in the United States is contrary to what the forward premium suggests. As explained earlier, a forward premium indicates higher interest rates in the foreign country (United States) compared to the base country (Great Britain). Therefore, this option is incorrect.

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.23 What is the *most likely* effect of a contractionary monetary policy at the same time as an expansionary fiscal policy?

A. Both aggregate demand and interest rates increase.

B. Both aggregate demand and interest rates decrease.

C. Aggregate demand increases while interest rates decrease.

Option A accurately describes the effects of a contractionary monetary policy combined with an expansionary fiscal policy. An expansionary fiscal policy typically involves increased government spending or decreased taxes, which stimulates aggregate demand. This is because when the government spends more or taxes less, consumers and businesses have more money to spend, which increases the overall demand for goods and services in the economy.

On the other hand, a contractionary monetary policy is usually implemented through increased interest rates. Higher interest rates make borrowing more expensive, which can slow economic growth. However, they also attract investment from foreign investors seeking higher returns, which can increase the supply of money in the economy. This increase in money supply can offset the contractionary effects of higher interest rates, leading to an overall increase in aggregate demand.

Furthermore, when the government implements an expansionary fiscal policy, it often needs to borrow money to finance its increased spending or make up for the loss of tax revenue. This increased borrowing can drive up interest rates, as the government competes with private borrowers for available funds. Therefore, the combination of an expansionary fiscal policy and a contractionary monetary policy can lead to both higher aggregate demand and higher interest rates, as described in option A.

B is incorrect. This option suggests that both aggregate demand and interest rates decrease, which is not the expected outcome of the combination of policies described in the question. An expansionary fiscal policy is designed to increase aggregate demand, not decrease it. Similarly, a contractionary monetary policy typically leads to higher interest rates, not lower ones. Therefore, this option does not accurately reflect the effects of these policies.

C is incorrect. This option suggests that aggregate demand increases while interest rates decrease. While the first part of this statement is correct - an expansionary fiscal policy would likely increase aggregate demand - the second part is not. A contractionary monetary policy, which involves measures such as increasing interest rates, would not lead to a decrease in interest rates. Therefore, this option does not accurately describe the effects of the combination of policies described in the question.

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

Q.24 Recovery from a recession is *most likely* to be preceded by:

A. A reduction in building permits issued and manufacturer's new orders for capital goods.

B. An increase in average weekly hours and a reduction in average weekly unemployment insurance claims.

C. A reduction in the average duration of unemployment and a reduction in consumer credit outstanding to personal income.

A recovery from a recession is most likely to be preceded by an increase in average weekly hours and a reduction in average weekly unemployment insurance claims. This is because these two factors are considered leading indicators of the business cycle. A leading indicator is a measurable economic factor that changes before the economy starts to follow a particular pattern or trend. In this case, an increase in average weekly hours indicates that businesses are requiring their employees to work more, which is usually a response to increased demand for their products or services. This increased demand is a sign that the economy is starting to recover from a recession. Similarly, a reduction in average weekly unemployment insurance claims suggests that fewer people are losing their jobs, which is another sign of economic recovery.

A is incorrect. A reduction in building permits issued and manufacturer's new orders for capital goods is not a sign of recovery from a recession. Instead, these are signs of a slowing economy. Building permits are a leading indicator of future construction activity. A reduction in building permits suggests that there will be less construction in the future, which can lead to job losses in the construction industry and related sectors. Similarly, a reduction in manufacturer's new orders for capital goods suggests that businesses are not planning to expand their operations, which is not a sign of economic recovery.

C is incorrect. A reduction in the average duration of unemployment and a reduction in consumer credit outstanding to personal income are not reliable indicators of recovery from a recession. The average duration of unemployment can decrease for a variety of reasons, not all of which are positive. For example, it could decrease because people are accepting jobs that they are overqualified for just to make ends meet. Similarly, a reduction in consumer credit outstanding to personal income could be a sign that people are paying off their debts, but it could also be a sign that people are cutting back on spending, which is not a sign of economic recovery.

CFA Level 1, Topic 2 – Economics, Learning Module 2 – Understanding Business Cycles, LOS 2c: Describe how resource use, consumer and business activity, housing sector activity, and external trade sector activity vary over the business cycle and describe their measurement using economic indicators.

Q.25 Which of the following characteristics is *least likely* to describe monopolistic competition?

A. High barriers to entry.

B. Large number of independent sellers.

C. Differentiated and innovative products.

Monopolistic competition is a market structure that falls between perfect competition and monopoly. It is characterized by a large number of independent sellers, each selling differentiated and innovative products. The key feature of this market structure is that while firms are competing with each other, they also have some degree of market power due to product differentiation. This allows them to set their prices and quantities to some extent, unlike in perfect competition where firms are price takers. However, unlike a monopoly, there are no high barriers to entry in monopolistic competition. This means that new firms can easily enter the market if they see an opportunity for profit.

B is incorrect. While it is true that monopolistic competition involves a large number of independent sellers, this option is not the least likely to describe monopolistic competition. In fact, it is one of the defining characteristics of this market structure. The large number of sellers in the market ensures that no single firm has the market power to influence the price of the product. Each firm in a monopolistic competition has a small market share and faces competition from numerous other firms selling similar but differentiated products.

C is incorrect. Differentiated and innovative products are a key feature of monopolistic competition. Each firm in this market structure sells a product that is slightly different from its competitors. This product differentiation can be based on various factors such as quality, design, branding, customer service, etc. This allows each firm to have some degree of market power as they can set their own prices to some extent. Therefore, this option is not the least likely to describe monopolistic competition.

CFA Level 1, Topic 2 – Economics, Learning Module 1 – Firm and Market Structure, 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.26 The breakeven quantity of production under perfect competition is the quantity for which:

A. Price = Total revenue.

B. Price = Average total cost.

C. Total revenue = Marginal revenue.

In perfect competition, the breakeven quantity of production is the quantity at which the price equals the average total cost. This is the point where a firm neither makes a profit nor incurs a loss. The total revenue at this point equals the total cost of production. This is because the average total cost includes both variable and fixed costs. When the price a firm receives for its product equals its average total cost, it means that the firm is covering all its costs, both variable and fixed, and is therefore breaking even.

A is incorrect. The statement 'Price = Total revenue' is not accurate in the context of breakeven quantity of production. Total revenue is calculated by multiplying the price by the quantity sold. Therefore, price cannot be equal to total revenue unless the quantity sold is one. This is not a general rule and does not define the breakeven point under perfect competition. The breakeven point is defined as the point where total revenue equals total cost, not where price equals total revenue.

C is incorrect. The statement 'Total revenue = Marginal revenue' is also not accurate in the context of breakeven quantity of production. Marginal revenue is the additional revenue that a firm receives from selling one more unit of a good. In perfect competition, marginal revenue equals price, not total revenue. Total revenue is the total income from selling a certain quantity of goods, while marginal revenue is the additional income from selling one more unit. Therefore, the breakeven point cannot be defined as the point where total revenue equals marginal revenue.

CFA Level 1, Topic 2 – Economics, Learning Module 1 – Firm and Market Structure, 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.27 Which of the following conditions would *least likely* need to be present for a large country to increase its welfare by imposing a tariff?

A. Its trading partner does not retaliate.

B. The exporter reduces the price of its goods.

C. The deadweight loss from the tariff is smaller than the benefit of its terms of trade.

The exporter reducing the price of its goods is not a necessary condition for a large country to increase its welfare by imposing a tariff. The reduction in the price of goods by the exporter is a reaction to the imposition of a tariff by a large country. The exporter may choose to reduce the price of its goods to maintain its market share, which could be threatened by the tariff. However, this is not a prerequisite for the large country to benefit from the tariff. The welfare of the large country is not directly dependent on the actions of the exporter, but rather on the effects of the tariff itself.

A is incorrect. The statement suggests that the trading partner does not retaliate. This is not a necessary condition for a large country to increase its welfare by imposing a tariff, but it can be beneficial. If the trading partner retaliates, it could lead to a trade war, which could have negative effects on the large country's economy. However, the absence of retaliation does not guarantee an increase in welfare. The impact of a tariff on a country's welfare is complex and depends on a variety of factors, including the nature of the goods involved, the economic conditions of the country, and the responses of consumers and producers.

C is incorrect. The statement suggests that the deadweight loss from the tariff is smaller than the benefit of its terms of trade. This is a necessary condition for a tariff to increase a country's welfare. A tariff can lead to a deadweight loss, which is a loss of economic efficiency. If this loss is smaller than the benefit gained from improved terms of trade, the country can experience an increase in welfare. However, this is not always the case. The impact of a tariff on a country's terms of trade and the resulting deadweight loss can vary widely, depending on the specifics of the tariff and the economic conditions of the country.

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

Q.28 Company A has developed a new product and acquired a patent for the next 20 years. It faces the following demand and cost schedules:

Output (units)	Price/unit ($)	Cost (total $)
10	5,000	60,000
20	4,700	100,000
30	4,400	130,000
40	4,300	160,000
50	4,200	190,000
60	3,910	220,000

Company A's optimal output level is *closest to*:

A. 40 units.

B. 50 units.

C. 60 units.

The optimal output is based on the output levels that maximize profits

Output	Total Revenues	Total Costs	Profit
10	$50,000	$60,000	($10,000)
20	$94,000	$100,000	($6,000)
30	$132,000	$130,000	$2,000
40	$172,000	$160,000	$12,000
50	$210,000	$190,000	$20,000
60	$234,000	$220,000	$13,400

A is incorrect. At 40 units, the realized profit is $12,000 compared to the optimal output level at 50 units with a realized profit of $20,000.

C is incorrect. At 60 units, the realized profit is $13,400 compared to the optimal output level at 50 units, realizing a profit of $13,400.

CFA Level 1, Topic 2, Reading 9– The Firm and Market Structures, LOS 9d: Describe and determine the optimal price and output for firms under each market structure

Q.29 An analyst wishing to assess if the economy is moving out of a recession and into the expansion phase is *most likely* looking for:

A. A deceleration in the rate of inflation.

B. An upturn in expenditures for housing and consumer durables.

C. A decline in average consumer expectations for business and economic growth.

The expansion phase of the business cycle is typically led by upturns in consumer spending. These upturns are more pronounced in sectors such as housing and consumer durables. During a recession, consumer spending usually decreases due to factors such as job losses, reduced income, and lower consumer confidence. However, as the economy starts to recover and move into the expansion phase, consumer spending begins to increase. This increase is often first seen in sectors such as housing and consumer durables, as consumers start to feel more confident about the economy and their personal financial situation. Therefore, an analyst looking for signs that the economy is moving out of a recession and into the expansion phase would most likely be looking for an upturn in expenditures for housing and consumer durables.

A is incorrect. Inflation typically decreases during recessions and increases during expansions or recoveries. This is because during a recession, there is less demand for goods and services, which can lead to lower prices and therefore lower inflation. On the other hand, during an expansion, there is increased demand for goods and services, which can lead to higher prices and therefore higher inflation. Therefore, a deceleration in the rate of inflation is not a reliable sign that the economy is moving out of a recession and into the expansion phase.

C is incorrect. Average consumer expectations for business and economic growth is a leading indicator of economic activity. A decline in this indicator usually suggests that a recession is impending, not that the economy is moving out of a recession. During a recession, consumer expectations for business and economic growth are typically low. As the economy starts to recover, these expectations start to improve. Therefore, a decline in average consumer expectations for business and economic growth is not a reliable sign that the economy is moving out of a recession and into the expansion phase.

CFA Level 1, Topic 2 – Economics, Learning Module 2 – Understanding Business Cycles, LOS 2c: Describe how resource use, consumer and business activity, housing sector activity, and external trade sector activity vary over the business cycle and describe their measurement using economic indicators.

Q.30 If the USD/CAD spot rate is 1.5011 and the USD/CAD forward rate is 1.4413, then the forward discount is *closest to*:

A. -0.0398

B. 0.0398

C. 0.0415

The forward discount is calculated by subtracting the spot rate from the forward rate and then dividing the result by the spot rate. The formula for calculating the forward discount is:

$$\text{Forward Discount} = \frac{\text{Forward Rate} - \text{Spot Rate}}{\text{Spot Rate}}$$

In this case, the USD/CAD forward rate is 1.4413, and the USD/CAD spot rate is 1.5011. Substituting the given values into the formula, we get:

$$\text{Forward Discount} = \frac{1.4413 - 1.5011}{1.5011}$$

Now calculate the difference and divide by the spot rate:

$$\text{Forward Discount} = \frac{-0.0598}{1.5011} \approx -0.0398$$

This means that the forward rate is lower than the spot rate, indicating a forward discount of approximately -3.98%. A forward discount occurs when the forward rate is lower than the spot rate, suggesting that the base currency (USD) is expected to depreciate against the quote currency (CAD) over the term of the forward contract.

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.31 When a central bank increases the supply of money and credit in an economy, it is referred to as a (an):

A. Contractionary policy.

B. Restrictive monetary policy.

C. Expansionary monetary policy.

An expansionary monetary policy is a type of macroeconomic monetary policy that aims to increase the rate of monetary expansion to stimulate the growth of a domestic economy. This policy is typically implemented by a central bank with the goal of boosting economic activity. The central bank does this by increasing the supply of money and credit in the economy, which lowers interest rates and makes borrowing cheaper. This encourages businesses and consumers to spend and invest more, which can lead to economic growth. The central bank can increase the money supply by buying government bonds, lowering reserve requirements for banks, or reducing the interest rate it charges banks for short-term loans.

A is incorrect. A contractionary monetary policy is a type of monetary policy that aims to reduce the rate of monetary expansion. This is the opposite of an expansionary monetary policy. A central bank implements a contractionary policy to fight inflation by slowing down the economy's growth. It does this by decreasing the supply of money and credit, which raises interest rates and makes borrowing more expensive. This discourages spending and investment, slowing economic activity. The central bank can decrease the money supply by selling government bonds, raising reserve requirements for banks, or increasing the interest rate it charges banks for short-term loans.

B is incorrect. Restrictive monetary policy, also known as contractionary monetary policy, is a type of monetary policy that aims to slow down the economy when it is growing too fast. This policy is implemented to prevent or curb inflation. The central bank does this by reducing the supply of money and credit in the economy, which raises interest rates and makes borrowing more expensive. This discourages businesses and consumers from spending and investing, which can slow economic growth. The central bank can implement a restrictive monetary policy by selling government bonds, raising reserve requirements for banks, or increasing the interest rate it charges banks for short-term loans.

CFA Level 1, Topic 2 – Economics, Learning Module 4 – Monetary Policy, LOS 4c: Describe qualities of effective central banks; contrast their use of inflation, interest rate, and exchange rate targeting in expansionary or contractionary monetary policy; and describe the limitations of monetary policy.

Q.32 Belgium and Germany have a free trade with each other. However, both countries have separate trade barriers on imports from other countries. Belgium and Germany are *most likely* part of:

A. a free trade area.

B. a common market.

C. an economic union

A free trade area (FTA) is a regional integration agreement where all barriers to the flow of goods and services among member countries have been removed. This means that the countries involved have agreed to eliminate tariffs, quotas, and preferences on most, if not all, goods and services traded between them. In the case of Belgium and Germany, they have a free trade agreement with each other, which means they do not impose tariffs or quotas on each other's goods. However, they maintain their own independent trade policies with other countries, which is a characteristic of a free trade area. Therefore, based on the information given in the question, Belgium and Germany are most likely part of a free trade area.

B is incorrect. A common market is a type of trade agreement where members not only have a free trade agreement but also allow free movement of factors of production such as labor and capital among the member countries. This means that workers and capital can move freely across the borders of the member countries. However, the question does not provide any information suggesting that Belgium and Germany allow free movement of labor and capital between them.

C is incorrect. An economic union is a type of trade agreement that includes all aspects of a common market and also requires common economic institutions and coordination of economic policies among member countries. This means that the member countries not only have a free trade agreement and allow free movement of labor and capital, but they also have a coordinated economic policy and common institutions. However, the question does not provide any information suggesting that Belgium and Germany have common economic institutions or coordinated economic policies. Therefore, it is unlikely that they are part of an economic union.

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

Q.33 With respect to the impact of fiscal policy on aggregate demand:

A. monetarists forecast the effects as powerful.

B. Keynesians believe that the effect is only temporary.

C. Keynesians forecast a powerful effect subject to the spare capacity in an economy.

Keynesians indeed forecast a powerful effect of fiscal policy on aggregate demand, but this is subject to the spare capacity in an economy. The Keynesian economic theory suggests that government spending can help stimulate the economy during periods of contraction. This is because, according to Keynesians, fiscal policy has a multiplier effect on the economy. When the government spends more, it puts more money into the hands of consumers, who then spend more, thereby increasing aggregate demand. However, this effect is subject to the spare capacity in an economy. If an economy is already operating at full capacity, additional government spending may not increase aggregate demand but may instead lead to inflation.

A is incorrect. Monetarists do not forecast the effects of fiscal policy as powerful. Monetarists, unlike Keynesians, believe that changes in the money supply are the most significant determinants of the rate of economic growth and that attempts to control the economy through fiscal policy are both futile and potentially destabilizing. They argue that fiscal policy changes only temporarily affect aggregate demand because people adjust their expectations and behavior based on the changes in fiscal policy.

B is incorrect. Keynesians do not believe that the effect of fiscal policy on aggregate demand is only temporary. As mentioned earlier, Keynesians believe in a powerful and lasting impact of fiscal policy on aggregate demand, especially when there is substantial spare capacity in an economy. They argue that government spending can stimulate the economy by increasing aggregate demand, and this effect can be sustained over time as long as the government continues to spend.

CFA Level 1, Topic 2 – Economics, Learning Module 3 – Fiscal Policy, LOS 3b: Describe roles and objectives of fiscal policy as well as arguments as to whether the size of a national debt relative to GDP matters.

Q.34 Which of the following is *most likely* a coincident economic indicator?

A. The Consumer Price Index (CPI)

B. The Consumer Confidence Index® (CCI)

C. Personal income minus transfer payments

Coincident economic indicators are those that change direction at the same time as the overall economy, providing real-time data about the state of the economy. Personal income minus transfer payments falls into this category because it reflects the current earnings of individuals, excluding any government assistance they may receive. This measure is directly tied to the health of the economy. When the economy is doing well, personal income tends to rise as businesses generate more revenue and can afford to pay higher wages. Conversely, when the economy is in a downturn, personal income tends to fall as businesses cut back on spending and lay off workers. Therefore, changes in personal income minus transfer payments occur simultaneously with changes in the overall economy, making it a coincident economic indicator.

A is incorrect. The Consumer Price Index (CPI) is not a coincident, but a lagging economic indicator. Lagging indicators are those that change direction after the economy has already begun to follow a particular trend. The CPI measures the average change in prices paid by urban consumers for a basket of goods and services, and it is used as a measure of inflation. Inflation is a lagging indicator because it tends to rise or fall after the economy has already begun to recover or decline. Therefore, the CPI does not change direction at the same time as the economy, but rather follows behind it, making it a lagging indicator.

B is incorrect. The Consumer Confidence Index® (CCI) is not a coincident, but a leading economic indicator. Leading indicators are those that change direction before the overall economy does, providing a glimpse into the future state of the economy. The CCI measures how optimistic or pessimistic consumers are about the economy's future. When consumers are confident, they are more likely to spend money, which can stimulate economic growth. Conversely, when consumers are pessimistic, they are more likely to save money, which can slow economic growth. Therefore, changes in consumer confidence occur before changes in the overall economy, making it a leading indicator.

CFA Level 1, Topic 2 – Economics, Learning Module 2 – Understanding Business Cycles, LOS 2c: Describe how resource use, consumer and business activity, housing sector activity, and external trade sector activity vary over the business cycle and describe their measurement using economic indicators.

Q.35 Jennifer Hollanda is a long-term trader who purchased a Petro Co. share at the price of $50 at the beginning of the year. Assuming that the share price increased to $100 in the 1st year, decreased to $50 in the 2nd year, decreased to $25, and increased to $50 in the 3rd and 4th year respectively.The geometric mean return of the Petro Co. share is *closest to*:

A. 0%

B. 50%

C. 100%

In the first year, Jennifer's return on investment is calculated by subtracting her initial investment from the final value of the share, dividing by the initial investment, and then converting to a percentage. This gives us $\frac{100}{50} - 1 = 100\%$. This means that Jennifer's investment doubled in the first year.

In the second year, the share price decreased to $50. The return for this year is calculated as $\frac{50}{100} - 1 = -50\%$. This means that Jennifer's investment halved in the second year.

In the third year, the share price decreased further to $25. The return for this year is calculated as $\frac{25}{50} - 1 = -50\%$. This means that Jennifer's investment halved again in the third year.

In the fourth year, the share price increased back to $50. The return for this year is calculated as $\frac{50}{25} - 1 = 100\%$. This means that Jennifer's investment doubled in the fourth year.

Before we find the geometric mean, we must convert the percentage rates of return to $(1 + \text{Rt})$. This gives us 2 for the first year, 0.5 for the second year, 0.5 for the third year, and 2 for the fourth year.

The geometric mean is then calculated as $(2 \times 0.5 \times 0.5 \times 2)^{\frac{1}{4}} - 1 = 0\%$. This means that the average rate of return over the four years, when compounded, is 0%.

B is incorrect. A geometric mean return of 50% would imply that Jennifer's investment increased by 50% on average each year, which is not the case. The returns for the four years were 100%, -50%, -50%, and 100%, which do not average to 50%.

C is incorrect. A geometric mean return of 100% would imply that Jennifer's investment doubled on average each year, which is also not the case. While the investment did double in the first and fourth years, it halved in the second and third years, leading to an overall geometric mean return of 0%.

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

Q.36 Richards would like to determine the ability of her regression model to generate price forecasts. She identifies three factors, which may be useful in developing a prediction interval: **Factor 1**: Variance of mean construction costs = 27.9. **Factor 2**: Variance of mean forecasted project price = 18.35. **Factor 3**: Mean construction costs = 98.54. **Factor 4**: Correlation between mean construction costs and mean forecasted price = 0.75. Which of the following factors will *most likely* be required to construct a prediction interval?

A. Factor 1.

B. Factor 2.

C. Factor 4.

The prediction interval of a regression model is calculated using the formula:

$$\hat{b}_1 \pm t_c s_{\hat{b}_1}$$

Where:

$\hat{b}_1$ = slope coefficient.

t_c = critical two-tailed *t*-value.

$s_{\hat{b}_1}$ = standard error of the regression coefficient.

The standard error of the regression coefficient is a measure of the amount of error in the estimate of the regression coefficient. It is calculated using the variance of the dependent variable, which in this case is the mean construction costs. Therefore, the variance of mean construction costs (Factor 1) is required to calculate the standard error of the regression coefficient, and hence, to construct the prediction interval.

B is incorrect. Factor 2: Variance of mean forecasted project price = 18.35, is not required to construct a prediction interval. The prediction interval is calculated using the variance of the dependent variable, not the variance of the forecasted values. The variance of the forecasted values is a measure of the dispersion of the predicted values around the mean predicted value, and does not contribute to the calculation of the standard error of the regression coefficient, which is used to construct the prediction interval.

C is incorrect. Factor 4: Correlation between mean construction costs and mean forecasted price = 0.75, is also not required to construct a prediction interval. The correlation between the dependent and independent variables is a measure of the strength and direction of the linear relationship between the two variables. While it is an important factor in determining the fit of the regression model, it does not contribute to the calculation of the standard error of the regression coefficient, which is used to construct the prediction interval.

CFA Level 1, Topic 2 – Quantitative Methods, Learning Module 10 - Simple Linear Regression, LOS 10e: calculate and interpret the predicted value for the dependent variable, and a prediction interval for it, given an estimated linear regression model and a value for the independent variable.

Q.37 Supervised learning and unsupervised learning both require at least one:

A. Hidden attribute.

B. Output attribute.

C. Input attribute.

Both supervised and unsupervised learning require at least one input attribute. In supervised learning, computers learn to model relationships based on labeled training data. Both inputs and at least one output are labeled for the algorithm. This means that the algorithm is trained using labeled data, where the desired output is known. The algorithm receives a set of inputs along with the corresponding correct outputs, and the algorithm learns by comparing its actual output with correct outputs to find errors and modify the model accordingly.

On the other hand, unsupervised learning is a type of machine learning algorithm used to draw inferences from datasets consisting of input data without labeled responses. The most common unsupervised learning method is cluster analysis, which is used for exploratory data analysis to find hidden patterns or grouping in data. Here, computers are not given labeled data but instead are given only input data. The algorithm then seeks to describe the data and its structure. This means that the algorithm is not trained using labeled data, instead, it identifies patterns in the data based on the input attributes alone.

A is incorrect. Neither supervised nor unsupervised learning requires a hidden attribute. A hidden attribute refers to a feature or characteristic that is not immediately apparent or visible in the data. While hidden attributes may be discovered through the process of machine learning, particularly in unsupervised learning where the algorithm seeks to identify patterns and structures in the data, they are not a requirement for either supervised or unsupervised learning.

B is incorrect. While supervised learning does require an output attribute, unsupervised learning does not. In supervised learning, the output attribute is used as a label to guide the learning process. The algorithm is trained on a set of input data and the corresponding output attributes, and it learns by comparing its actual output with the correct outputs to find errors and modify the model. However, in unsupervised learning, there are no output attributes. The algorithm is given only input data and it seeks to identify patterns and structures in the data based on these inputs alone.

CFA Level 1, Topic 2, Reading 2 – Organizing, Visualizing, and Describing Dat, LOS 2a: identify and compare data types.

Q.38 Identify which of the following statements regarding intangible assets are *most likely* correct.

I. An intangible asset with a finite life is amortized over its useful life.
II. An intangible asset with an indefinite life is tested for impairment.
III. If an indefinite-lived intangible asset is impaired, the loss is recognized in the income statement.

A. Statement III.

B. Statements I & III.

C. Statements I, II, & III.

Intangible assets are non-physical assets that have a long-term value. These assets can include patents, copyrights, brand names, and other similar items. The nature of these assets is such that they do not have a physical presence but contribute significantly to the value and operations of a company.

Statement I is correct as it states that an intangible asset with a finite life is amortized over its useful life. Amortization is the process of gradually writing off the initial cost of an asset over a period. In the case of intangible assets with a finite life, such as patents or copyrights, the cost of the asset is spread over its useful life, which is the period over which the asset is expected to contribute to the company's revenue-generating activities.

Statement II is also correct as it mentions that an intangible asset with an indefinite life is tested for impairment. Impairment testing is a procedure carried out to determine if an asset's carrying value exceeds its recoverable amount. For intangible assets with an indefinite life, such as brand names or goodwill, they are not amortized but are tested for impairment annually or whenever there is an indication of impairment.

Statement III is correct as well. If an indefinite-lived intangible asset is impaired, the loss is recognized in the income statement. This is because the impairment loss represents a decrease in the future economic benefits or service potential of an asset, which should be reflected in the company's financial statements.

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.39 Jayy Ltd. is a cosmetic manufufucter. An excerpt of its income statement during 2019 is given in the table below:

Revenue	$R\$2,000,000$
Cash Collected	$R\$500,000$
Returns of goods sold	$R\$200,000$
Cost of goods sold	$R\$800,000$

Given that the company uses the accrual basis of accounting, the net revenue recognized for the 2019 income statement is *closest* to:

A. R$1.8 million.

B. R$2.5 million.

C. R$3.3 million.

Jayy Ltd., a cosmetic manufacturer, uses the accrual basis of accounting. In this method, revenues and expenses are recorded when they are earned and incurred, respectively, not when the cash is received or paid. This is in contrast to the cash basis of accounting, where revenues and expenses are recorded when cash is received or paid. The accrual basis provides a more accurate picture of a company's financial health as it takes into account all financial transactions, regardless of when the cash changes hands.

Given the data from the income statement, we are asked to calculate the net revenue for the year 2019. Net revenue is calculated as the total revenue minus any returns and allowances. In this case, the total revenue is R$2,000,000 and the returns of goods sold amount to R$200,000. Therefore, the net revenue is calculated as follows:

$$\text{Net Revenue} = \text{Total Revenue} - \text{Returns of goods sold} = R\$2,000,000 - R\$200,000 = R\$1,800,0$$

Thus, the net revenue recognized for the 2019 income statement is closest to R$1.8 million.

B is incorrect. This option suggests that the net revenue is R$2.5 million. This would imply that the returns of goods sold are negative, which is not possible. Returns of goods sold are amounts refunded to customers for returned goods, and thus, they reduce the total revenue. They cannot increase the total revenue.

C is incorrect. This option suggests that the net revenue is R$3.3 million. This would imply that the company has additional revenue sources not mentioned in the income statement, or that the returns of goods sold are negative. As explained above, returns of goods sold cannot be negative. Furthermore, no additional revenue sources are mentioned in the income statement. Therefore, this option is not valid.

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.40 Calculate the percentage that will be represented by shareholders’ equity on a vertical common size balance sheet based on the information below.

- Liabilities of a company - $ 40 Million
- Shareholders' equity - $ 25 Million

A. 0.385

B. 0.615

C. 0.625

In a vertical common size balance sheet, each entry is represented as a percentage of total assets. The total assets of a company are calculated by adding the liabilities and the shareholders' equity. In this case, the liabilities of the company are $40 Million and the shareholders' equity is $25 Million. Therefore, the total assets of the company are $65 Million ($40 Million + $25 Million).

The percentage that will be represented by shareholders’ equity on a vertical common size balance sheet is calculated by dividing the shareholders' equity by the total assets and then multiplying the result by 100. In this case, the shareholders' equity is $25 Million and the total assets are $65 Million. Therefore, the percentage that will be represented by shareholders’ equity is 38.5% ($25 Million / $65 Million * 100).

B is incorrect. The option B represents 61.5% which is incorrect. This percentage would have been correct if we were calculating the percentage that will represent liabilities on a vertical common size balance sheet. However, in this case, we are calculating the percentage that will represent shareholders' equity. Therefore, option B is incorrect because it does not represent the correct percentage of shareholders' equity.

C is incorrect. The option C represents 62.5% which is incorrect. This percentage would have been correct if we were dividing the shareholders' equity by the liabilities. However, in a vertical common size balance sheet, each entry is represented as a percentage of total assets and not liabilities. Therefore, option C is incorrect because it does not represent the correct percentage of shareholders' equity.

CFA Level 1, Topic 3 -Financial Statement Analysis, Learning Module 3 – Analyzing Balance Sheets, LOS 3e: Calculate and interpret common-size balance sheets and related financial ratios.

Q.41 What condition of the fraud triangle would you *most likely* associate the following statement with? "I need to exceed investors' expectations to ensure stock prices increase"

A. Incentive.

B. Opportunity.

C. Attitude or rationalization.

The statement "I need to exceed investors' expectations to ensure stock prices increase" is most closely associated with the "Incentive" condition of the fraud triangle. This is because the speaker is under pressure to perform and meet certain expectations, which can lead to fraudulent behavior. The incentive here is the desire to increase stock prices and meet investors' expectations. This pressure can lead individuals to commit fraud in order to achieve these goals. The incentive condition of the fraud triangle refers to the pressures or motivations that lead individuals to consider committing fraud. These pressures can be personal or professional and can include things like financial difficulties, unrealistic performance expectations, or the desire for personal gain.

B is incorrect. While the statement does indicate a pressure or incentive, it does not necessarily indicate an opportunity. The opportunity condition of the fraud triangle refers to the circumstances that allow fraud to occur. This could be due to weak internal controls, inadequate oversight, or a lack of checks and balances. In this case, the statement does not provide any information about the presence of such opportunities. Therefore, while the speaker may feel pressured to commit fraud, there is no indication that they have the opportunity to do so.

C is incorrect. The statement does not provide any evidence of rationalization, which is the third condition of the fraud triangle. Rationalization refers to the process by which individuals justify their fraudulent actions. This can involve shifting the blame to others, minimizing the impact of their actions, or convincing themselves that their actions are necessary or justified. In this case, the speaker is expressing a pressure or incentive to commit fraud, but there is no indication that they are rationalizing or justifying fraudulent behavior.

CFA Level 1, Topic 3 – Financial Statement Analysis, Learning Module 10 – Financial Reporting Quality, LOS 10d: Describe motivations that might cause management to issue financial reports that are not high quality and conditions that are conducive to issuing low-quality, or even fraudulent, financial reports.

Q.42 Which of the following is the *most accurate* representation of the net operating cycle?

A. Days of inventory in hand + Days of sales outstanding.

B. Days of sales outstanding - Number of days of payables.

C. Days of inventory in hand + Days of sales outstanding - Number of days of payables.

The net operating cycle is a measure of a company's operational efficiency and its short-term financial health. It calculates the total time (in days) that a company takes to sell its inventory, collect receivables from customers, and pay its suppliers. The formula for the net operating cycle is: Days of inventory in hand + Days of sales outstanding - Number of days of payables. This formula accurately represents the time a company takes from purchasing its inventory to receiving cash from its sales, after paying its suppliers. This is why option C is the correct answer.

A is incorrect. The number of days of payables is missing in this option. The days of payables represent the time a company takes to pay its suppliers. Without this component, the calculation would only represent the time taken to sell the inventory and collect receivables, but not the time taken to pay the suppliers. This would result in an overestimation of the net operating cycle, as it does not account for the time the company has to pay its suppliers, which is a crucial part of the cycle.

B is incorrect. The days of inventory in hand represent the time a company takes to sell its inventory. Without this component, the calculation would only represent the time taken to collect receivables and pay suppliers, but not the time taken to sell the inventory. This would result in an underestimation of the net operating cycle, as it does not account for the time the company has to sell its inventory, which is a crucial part of the cycle.

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.43 Which of the following statements regarding inventory valuation are *most likely* accurate? I. Inventory costs should usually be capitalized. II. IFRS & US GAAP both allow the weighted average cost method of inventory. III. US GAAP does not permit the use of the last-in, first-out (LIFO) method of inventory.

A. I and III.

B. I and II.

C. I, II and III.

Statement I is accurate because inventory costs should usually be capitalized. Capitalizing inventory costs means that these costs are recognized as an asset on the balance sheet until the inventory is sold. This is a common practice in financial accounting and is in line with the matching principle, which states that expenses should be matched with the revenues they help to generate. Therefore, since inventory costs are incurred to generate future revenues, they should be capitalized.

Statement III is accurate because both IFRS and US GAAP do allow the weighted average cost method of inventory valuation. This method calculates the average cost of all inventory items to determine the cost of goods sold and ending inventory. It's a commonly used method because it's relatively simple to apply and results in a cost of goods sold and ending inventory value that falls somewhere between the values calculated using the FIFO and LIFO methods.

Statement III is accurate because US GAAP does allow companies to use the LIFO method. The LIFO method assumes that the most recently acquired inventory items are sold first. This can result in lower reported profits and lower taxes during periods of rising prices, which is why some companies prefer this method. However, it's important to note that while US GAAP allows LIFO, the International Financial Reporting Standards (IFRS) do not.

CFA Level 1, Topic 3 – Financial Statement Analysis, Learning Module 4 – Analyzing Statement of Cash flows I, LOS 4d: Contrast cash flow statements prepared under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles.

Q.44 A newly incorporated construction company reported revenue of $690,000, cost of goods sold (COGS) of $550,000, and operating expenses of $210,000. Assuming a tax rate of 25%, the firm should *most likely* report a:

A. Deferred tax assets of $17,500.

B. Deferred tax assets of $70,000.

C. Deferred tax liabilities of $70,000.

Deferred tax assets are essentially credits that a company can use to offset future tax liabilities. They are created when a company's fiscal income is lower than its taxable income, resulting in the company paying more taxes than it owes. In this case, the company can carry forward the excess tax paid as a deferred tax asset, which can be used to reduce future tax liabilities.

In this question, the company's earnings are calculated as the difference between its revenue and its total expenses (COGS and operating expenses). This results in a negative earnings figure of -$70,000. This negative earnings figure indicates a loss, which can be carried forward as a deferred tax asset. The value of the deferred tax asset is calculated by multiplying the loss by the tax rate, which in this case is 25%. Therefore, the deferred tax asset is $70,000 * 25% = $17,500.

B is incorrect. This option suggests a deferred tax asset of $70,000, which is not correct. The deferred tax asset is calculated by multiplying the loss by the tax rate, not by taking the loss as it is. Therefore, a deferred tax asset of $70,000 would imply a loss of $280,000 (assuming a tax rate of 25%), which is not the case here. This option seems to confuse the loss with the deferred tax asset, which are two different concepts.

C is incorrect. This option suggests a deferred tax liability of $70,000, which is also not correct. Deferred tax liabilities are created when a company's fiscal income is higher than its taxable income, resulting in the company owing more taxes than it has paid. In this case, however, the company has a loss, not a profit, so it cannot have a deferred tax liability. This option seems to confuse the concepts of deferred tax assets and liabilities, which are opposites.

CCFA 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.45 Which of the following is *most appropriate* statement regarding financial assets?

A. Available-for-sale securities are reported on the balance sheet at their amortized cost.

B. Held-to-maturity assets are stocks acquired with the intent of holding them until maturity.

C. Trading securities are debt, and equity securities acquired with the intent of selling them within a short period of time.

The trading securities are indeed a category of securities that are purchased with the intention of short-term profit making. These securities are bought and sold to capitalize on expected market price movements. They are not intended for long-term investment, but rather for generating profits from short-term price fluctuations. Trading securities can include stocks, bonds, and other financial instruments. They are reported at fair value and any unrealized gains or losses are included in earnings.

A is incorrect. Available-for-sale securities are indeed a category of investments, but they are reported at their fair value on the balance sheet, not their amortized cost. The unrealized gains or losses from these securities are reported as a separate component of shareholders' equity, under accumulated other comprehensive income. The amortized cost is used for held-to-maturity securities, not available-for-sale securities.

B is incorrect. Stocks, or equities, do not have a maturity date. They represent ownership in a company and can be held indefinitely. Held-to-maturity securities are typically debt securities, such as bonds or notes, which have a fixed maturity date. The investor intends to hold these securities until they mature, at which point the principal amount is returned.

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.46 Biotech Solutions limited had a weighted average of 60,000 shares of common stock outstanding for the year ended 31st Dec 2016. At the beginning of the year, the company has outstanding 10,000 options with an exercise price of USD 125. During the fiscal year, the company's market price has averaged USD 200 per share. The company reported a net income of USD 1,500,000 and declared and paid preferred dividends of USD 200,000 for the fiscal year. No other potentially dilutive financial instruments are outstanding. Biotech's diluted EPS is *closest* to:

A. USD 19.62

B. USD 20.39

C. USD 22.64

The treasury stock method is a way of calculating the diluted earnings per share (EPS) of a company. The treasury stock method assumes that all in-the-money options and warrants are exercised at the beginning of the reporting period, and the proceeds from this exercise are used to repurchase common shares at the average market price during the period.

For Biotech Solutions Limited, the company had 10,000 options with an exercise price of USD 125. If all these options were exercised, the company would receive:

$$\text{Proceeds} = 10,000 \times 125 = 1,250,000\,\text{USD}$$

This would increase the number of common shares outstanding from 60,000 to 70,000. However, under the treasury stock method, it is assumed that the company would use the proceeds to repurchase shares at the average market price of USD 200. The number of shares repurchased would be:

$$\text{Shares Repurchased} = \frac{1,250,000}{200} = 6,250\,\text{shares}$$

The increase in the number of outstanding shares is then calculated as:

$$\text{Incremental Shares} = 10,000 - 6,250 = 3,750\,\text{shares}$$

The diluted EPS is calculated by subtracting the preferred dividends from the net income and dividing the result by the sum of the weighted average number of shares outstanding and the incremental shares. For Biotech Solutions Limited, the diluted EPS is:

$$\text{Diluted EPS} = \frac{1,500,000 - 200,000}{60,000 + 3,750} = \frac{1,300,000}{63,750} \approx 20.392$$

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.47 Emily, a seasoned financial analyst, has been analyzing the financial statements of RetailCorp, a company known for its expansive chain of retail stores. For years, RetailCorp's financial performance has been stable, prompting Emily to predict similar stability in the future. However, recent market trends indicate a significant shift toward online shopping, a domain where RetailCorp has a limited presence. Despite these trends and reports forecasting a decline in traditional retail, Emily continues to project stability in RetailCorp's financial performance, basing her forecasts on the company's historical financial stability and her extensive experience in analyzing similar companies. Which of the following biases is Emily *most likely* exhibiting in her analysis?

A. Conservatism Bias.

B. Illusion of Control Bias.

C. Representativeness Bias.

Emily is demonstrating a conservatism bias in her analysis of RetailCorp's financial performance. Conservatism bias is a cognitive bias that causes individuals to be overly cautious in their forecasts and slow to incorporate new and relevant information into their predictions. This bias often leads individuals to stick to their prior beliefs or predictions, even when presented with new information that contradicts these beliefs. In Emily's case, she is aware of the recent market trends indicating a significant shift towards online shopping, a domain where RetailCorp has a limited presence. Despite these trends and reports forecasting a decline in traditional retail, Emily continues to project stability in RetailCorp's financial performance. Her forecasts are based on the company's historical financial stability and her extensive experience in analyzing similar companies, rather than the new market data. This reluctance to adjust her predictions in light of new market data is a clear example of conservatism bias.

A is incorrect. While Emily is indeed demonstrating a bias in her analysis, it is not the illusion of control bias. This particular bias involves an individual believing that they have more influence over events or outcomes than they actually do. In this scenario, Emily is not overestimating her control over events. Instead, she is demonstrating a reluctance to revise her forecasts based on new market trends. This behavior aligns more closely with conservatism bias, where an individual is slow to incorporate new and relevant information into their predictions.

B is incorrect. Representativeness bias involves an individual incorrectly assuming that past performance is indicative of future results. While it might seem that Emily is demonstrating this bias by basing her forecasts on RetailCorp's historical financial stability, the scenario more directly points to her reluctance to update her forecasts based on new information. This behavior is more indicative of conservatism bias, where an individual is slow to incorporate new and relevant information into their predictions, rather than representativeness bias, where an individual misinterprets the relevance of historical data.

Q.48 The auditors were not provided with the supporting documents for the majority of the transactions (including material transactions) selected for the audit. Which type of audit opinion should *most likely* be issued in such case?

A. An adverse opinion.

B. A qualified opinion.

C. A disclaimer of opinion.

The disclaimer of opinion is issued when the auditor is unable to express an opinion on the financial statements. In this case, the auditors were not provided with the supporting documents for the majority of the transactions, including material transactions, selected for the audit. This lack of documentation would prevent the auditors from being able to form an opinion on the accuracy and completeness of the financial statements. The auditors would not have the necessary evidence to verify the transactions and therefore, would not be able to determine if the financial statements are fairly presented in accordance with the applicable financial reporting framework. This situation would most likely result in the issuance of a disclaimer of opinion.

A is incorrect. An adverse opinion is issued when the auditor concludes that the financial statements are not presented fairly in accordance with the applicable financial reporting framework, or the statements are materially misstated. In this case, the auditors do not have enough evidence to conclude that the financial statements are materially misstated. The lack of supporting documents prevents the auditors from forming an opinion, but it does not necessarily mean that the financial statements are materially misstated. Therefore, an adverse opinion would not be the most likely outcome in this situation.

B is incorrect. A qualified opinion is issued when the auditor concludes that, except for the effects of the matter to which the qualification relates, the financial statements are presented fairly in all material respects in accordance with the applicable financial reporting framework. In this case, the auditors do not have enough evidence to conclude that, except for the lack of supporting documents, the financial statements are presented fairly. The lack of supporting documents affects the majority of the transactions, including material transactions, and therefore, it is not a specific matter that can be isolated. This situation would most likely result in a disclaimer of opinion, not a qualified opinion.

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.49 A company reported the following:

Net income	$700,000
Non-cash charges	$45,000
Interest expense	$25,000
Capital expenditures	$18,500
Tax rate	20%

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

A. $783,500

B. $450,000

C. $746,500

FCFF is used to calculate the amount available to debt and equity holders

FCFF=NI + NCC + Int(1-tax rate) - FCInv- WCInv

Where:

NI = Net Income.

NCC = Non-Cash Charges e.g. depreciation.

Int = Interest expense.

FCInv = Capital expenditures e.g. fixed capital, such as equipment.

WCInv = Working Capital expenditures.

$$\text{FCFF} = 700{,}000 + 45{,}000 + 25{,}000\,(1 - 0.20) - 18{,}500 - 0 = \$746{,}500$$

CFA Level 1, Topic 1 – 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.50 Calculate the inventory value from the following data using the weighted average cost method. The transactions took place in the order mentioned below.

- Opening stock: 7 units at $7 per unit.
- Purchased 5 units at $6 per unit.
- Purchased 3 units at $5 per unit.
- Sold 14 units.
- Purchased 2 units at $9 per unit.
- Sold 1 unit.

The ending inventory *is closest to*:

A. $15.11

B. $16.18

C. $18.23

The correct answer is **B.**

$$\text{Value per unit up to purchase of 15 units} = \frac{(\$7 \times 7 + \$6 \times 5 + \$5 \times 3)}{15} = \$6.27 \text{ per unit}$$

$$\text{Value per unit for 3 units in stock prior to last sale} = (\$6.27 \times 1 + \$9 \times 2) = \$24.27$$

$$\text{Ending inventory} = \$24.27 \times \frac{2}{3} = \$16.18$$

CFA Level 1, Topic 3, Reading 22– Inventories, LOS 22b: Describe different inventory valuation methods (cost formulas)

Q.51 In 2015, a company increased its deferred tax asset by $1,200,000. The company *most likely*:

A. became entitled to a $1,200,000 tax refund.

B. had a lower accounting profit compared to its taxable income.

C. had permanent differences between accounting profit and taxable income.

The company had a lower accounting profit compared to its taxable income. This is because deferred tax assets represent taxes that have been paid but not yet recognized in the income statement. A deferred tax asset or liability arises due to temporary differences between the taxes paid for the period and the taxes payable. These differences reflect the gap between the accounting profit and the taxable income. In this case, if the company increased its deferred tax asset by $1,200,000, it indicates that the company had a lower accounting profit compared to its taxable income. This is because a deferred tax asset is recognized when the taxes paid are more than the tax expense shown in the income statement, which usually happens when the accounting profit is less than the taxable income.

A is incorrect. Deferred tax assets represent taxes that have been paid (or often the carrying forward of losses from previous periods) but have not yet been recognized on the income statement. Therefore, the increase in deferred tax assets by $1,200,000 does not justify a tax refund. A tax refund would only be applicable if the company had overpaid its taxes, which is not indicated by the increase in deferred tax assets.

C is incorrect. Differences between accounting profits and taxable incomes are never permanent. They are temporary differences that are expected to reverse in the future. The difference between the two is what is reported as either a deferred tax asset or a liability. Therefore, the increase in deferred tax assets does not indicate permanent differences between accounting profit and taxable income.

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.52 The following information has recently been made available about a private company:

Operating profit margin	22%
Net profit margin	15%
Total asset turnover	0.95
Tax burden ratio	1.1
Financial leverage	1.4
Cash conversion cycle	42 days

The company's ROE is *closest to*:

A. 16%

B. 20%

C. 29%

The Return on Equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. It is considered the return on net assets. ROE is expressed as a percentage and can be used for comparing the profitability of companies in the same sector. It is also considered an indicator of how effective management is at using equity financing to fund operations and grow the company.

In this case, the Return on Equity (ROE) is calculated using the DuPont formula, which is:

$$\text{ROE} = \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Financial Leverage}$$

Substituting the given values into the formula, we have:

$$\text{ROE} = 0.15 \times 0.95 \times 1.4$$

Now calculate the result:

$$\text{ROE} = 0.1995 \approx 20\%$$

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.53 A firm has 10,000 shares of common stocks outstanding. Which of the following options will result in the highest number of total shares outstanding?

A. A 2-for-1 stock split.

B. A 5-for-4 stock split.

C. A 60% stock dividend.

A 2-for-1 stock split means that for every one share a shareholder owns, they will now own two shares. In this case, the firm has 10,000 shares of common stocks outstanding. If a 2-for-1 stock split is implemented, the total number of shares will double, resulting in 20,000 shares outstanding. This is the highest number of shares compared to the other options. The 2-for-1 stock split is a strategy used by companies to lower the trading price of their stock and attract more investors. However, it's important to note that while the number of shares increases, the total value of the shares remains the same.

A is incorrect. While a 5-for-4 stock split also increases the number of shares, it does not result in as many shares as a 2-for-1 split. In a 5-for-4 split, for every four shares a shareholder owns, they will now own five shares. If this option is implemented, the total number of shares will increase to 12,500 shares (5/4 * 10,000 shares). Although this is an increase, it is not as significant as the increase from a 2-for-1 split. This type of split is often used by companies that want to increase their number of shares but not drastically change the trading price of their stock.

C is incorrect. A 60% stock dividend means that shareholders receive additional shares equal to 60% of their current shares. If this option is implemented, the total number of shares will increase to 16,000 shares (1 + 0.6 * 10,000 shares). While this is a significant increase, it is still less than the number of shares resulting from a 2-for-1 split. Stock dividends are often used by companies as a way to reward shareholders without reducing their cash reserves.

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.54 Available-for-sale financial assets are measured at:

A. amortized cost.

B. fair value, with any unrealized holding gains or losses recognized in other comprehensive income.

C. fair value, with any unrealized holding gains or losses recognized as profit or loss on the income statement.

Available-for-sale financial assets are a category of financial assets that are non-derivative assets which are either designated as such or not classified in any of the other categories of financial assets. These assets are measured at fair value, with any unrealized holding gains or losses recognized in other comprehensive income. This is in accordance with the International Financial Reporting Standards (IFRS) which stipulates that changes in fair value of available-for-sale financial assets should be recognized in other comprehensive income until the investment is derecognized or until the investment is determined to be impaired. At that time, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to profit or loss. This is why option B is the correct answer.

A is incorrect. Amortized cost is used for the measurement of financial assets that are classified as held-to-maturity investments. Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity that an entity has the positive intention and ability to hold to maturity. These are measured at amortized cost using the effective interest method, less any impairment losses.

C is incorrect. This treatment is applicable to financial assets that are classified as held for trading. Held for trading assets are those that are acquired principally for the purpose of selling in the near term or are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking. These are measured at fair value, with any unrealized holding gains or losses recognized in profit or loss.

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.55 Under which of the following economic conditions would the inventory value using the first-in first-out method most likely exceed the inventory value using the last-in first-out method?

A. Stagflation.

B. Recession.

C. Deflation.

The First-In, First-Out (FIFO) method of inventory valuation assumes that the first goods purchased or produced are the first ones to be sold. Therefore, in periods of rising prices, which is a characteristic of stagflation, the cost of goods sold (COGS) under FIFO will be based on the cost of older, cheaper units, leaving the more expensive, recently purchased or produced units in ending inventory. As a result, the inventory value under FIFO will be higher than under the Last-In, First-Out (LIFO) method, which assumes that the most recently purchased or produced goods are sold first. In a stagflation scenario, where there is high inflation combined with high unemployment and stagnant demand, the cost of the most recent inventory will be higher due to inflation, and this will be reflected in the COGS under LIFO, leaving the older, cheaper units in ending inventory. Hence, the inventory value under LIFO will be lower than under FIFO.

B is incorrect. In a recession, demand for goods and services typically decreases, which can lead to a decrease in the selling price of inventory. This could potentially lead to a lower inventory value under both FIFO and LIFO. However, the impact on the inventory value under each method will depend on the specific cost and selling price of each unit of inventory, as well as the timing of purchases and sales. Therefore, without specific information about these factors, it is not possible to definitively say that the inventory value under FIFO will always exceed that under LIFO in a recession scenario.

C is incorrect. Deflation is characterized by falling prices. In a deflationary environment, the cost of goods sold (COGS) under FIFO will be based on the cost of older, more expensive units, leaving the cheaper, recently purchased or produced units in ending inventory. As a result, the inventory value under FIFO could potentially be lower than under LIFO, which assumes that the most recently purchased or produced goods are sold first. In a deflation scenario, the cost of the most recent inventory will be lower due to deflation, and this will be reflected in the COGS under LIFO, leaving the older, more expensive units in ending inventory. Hence, the inventory value under LIFO could potentially be higher than under FIFO.

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.56 The financial data of UniLateral Equipment for the year 2014 is provided in the following table:

Account	Amount (in million $)
Net income	700
Depreciation expense	57
Decrease in accounts receivable	49
Increase in inventory	36
Interest expense	100
Increase in capital expenditure	180
Debt issued	450
Debt repaid	330

Assuming a tax rate of 40% for the firm, the free cash flow to equity (FCFE) for the year 2014 is *closest* to:

A. $650 million.

B. $710 million.

C. $770 million.

The Free Cash Flow to Equity (FCFE) is calculated using the following formula:

$$\text{FCFE} = \text{Cash Flow from Operating Activities (CFO)} - \text{Fixed Capital Investment} + \text{Net Borrowing}$$

The CFO is calculated by adjusting the Net Income with non-cash items and changes in working capital. In this case:

- Net Income = \$700 million
- Depreciation = \$57 million
- Decrease in Accounts Receivable = \$49 million
- Increase in Inventory = \$36 million

The formula for CFO is:

$$\text{CFO} = 700 + 57 + 49 - 36 = 770\,\text{million}$$

The Fixed Capital Investment is given as the increase in Capital Expenditure, which is:

$$\text{Fixed Capital Investment} = 180\,\text{million}$$

Net Borrowing is calculated as the difference between Debt Issued and Debt Repaid. In this case:

- Debt Issued = \$450 million
- Debt Repaid = \$330 million

So, Net Borrowing is:

$$\text{Net Borrowing} = 450 - 330 = 120\,\text{million}$$

Now, substituting all the values into the FCFE formula:

$$\text{FCFE} = 770 - 180 + 120 = 710\,\text{million}$$

A is incorrect. A Free Cash Flow to Equity (FCFE) of $650 million would imply that the company had either lower Cash Flow from Operating Activities (CFO), higher Fixed Capital Investment, or lower Net Borrowing than what was actually reported. However, based on the given financial data, we can see that this is not the case. Therefore, option A is not the correct answer.

C is incorrect. A Free Cash Flow to Equity (FCFE) of $770 million would imply that the company had either higher Cash Flow from Operating Activities (CFO), lower Fixed Capital Investment, or higher Net Borrowing than what was actually reported. However, based on the given financial data, we can see that this is not the case. Therefore, option C is not the correct answer.

CFA Level 1, Topic 3 – Financial Statement Analysis, Learning Module 5 – Analyzing Statement of Cash Flows 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.57 The table below contains information that was extracted from the financial statements of XYZ Company. Use the information to determine the effective tax rate of the company for the year 2015.

	Financial Years 2015 (Amount in $)	Financial Year 2014 (Amount in $)
Income before taxes	88,000	75,000
Tax Payable	10,500	7,500
Deferred Tax Assets	65,000	50,000
Deferred Tax Liabilities	35,000	25,000

A. 0.0625

B. 0.1193

C. 0.233

The effective tax rate is calculated by dividing the income tax expense by the pre-tax income. The formula for the effective tax rate is:

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

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

- Income Tax Payable = 10,500
- Change in DTL = 35,000 - 25,000 = 10,000
- Change in DTA = 65,000 - 50,000 = 15,000

The income tax expense is calculated as follows:

$$\text{Income Tax Expense} = 10{,}500 + 10,000 - 15{,}000 = 5,500$$

Now, calculate the effective tax rate by dividing the income tax expense by the pre-tax income:

$$\text{Effective Tax Rate} = \frac{5,500}{88,000} \approx 0.0625 \, \text{or} \, 6.25\%$$

B is incorrect. This option suggests that the effective tax rate can be calculated by simply dividing the income tax payable by the pre-tax income, without considering the change in deferred tax liabilities and assets. This is incorrect because the change in deferred tax liabilities and assets represents future tax obligations and benefits that will affect the company's tax expense. Ignoring these factors would result in an inaccurate calculation of the effective tax rate.

C is incorrect. This option suggests that the effective tax rate can be calculated by considering only the income tax payable and the change in deferred tax liabilities, without considering the change in deferred tax assets. This is incorrect because the change in deferred tax assets represents future tax benefits that will reduce the company's tax expense. Ignoring this factor would result in an overestimation of the effective tax rate.

CFA Level 1, Topic 3 – Financial statement Analysis, Learning Module 9 – Analysis of Income Taxes, LOS 9c: Calculate, interpret, and contrast an issuer's effective tax rate, statutory tax rate, and cash tax rate.

Q.58 Argon Pharma limited reported a net income of USD 450,000 for the year ended on 30th June, 2017. The outstanding shares of common stock and convertible preferred shares are 40,000 and 10,000, respectively, and there are no other potentially dilutive securities. Each preferred share pays a dividend of USD 16 per share, and each is convertible into two shares of common stock. What was the reported diluted EPS of the company?

A. USD 4.83

B. USD 7.25

C. USD 7.50

Argon Pharma Limited's reported net income for the year ending on 30th June 2017 was USD 450,000. The company has 40,000 outstanding shares of common stock and 10,000 convertible preferred shares. Each preferred share can be converted into two shares of common stock, and each pays a dividend of USD 16 per share. The question asks for the diluted EPS (Earnings Per Share) of the company.

In this case, if the 10,000 convertible preferred shares were each converted into 2 shares of common stock, Argon Pharma Limited would have an additional 20,000 shares. This would increase the total number of shares to 60,000. However, if this conversion took place, the company would not have to pay the preferred dividends of USD 160,000. Therefore, the net income available for common shareholders would increase to USD 610,000 (USD 450,000 + USD 160,000).

The basic EPS is calculated by dividing the net income available for common shareholders by the weighted average number of common shares outstanding during the period. In this case, the basic EPS is USD 7.25 (USD 450,000 / 40,000).

The diluted EPS, on the other hand, is calculated by dividing the adjusted net income (net income + preferred dividends) by the adjusted number of shares (common shares + converted preferred shares). In this case, the diluted EPS is USD 7.50 (USD 610,000 / 60,000).

However, the diluted EPS is higher than the basic EPS. This means that the conversion of the preferred shares is anti-dilutive. Therefore, the diluted EPS reported would be the same as the basic EPS, which is USD 7.25.

A is incorrect. The option A suggests that the diluted EPS is USD 4.83. This is incorrect because it does not take into account the conversion of the preferred shares and the subsequent increase in the net income available for common shareholders. The correct calculation should consider these factors, which results in a diluted EPS of USD 7.25.

C is incorrect. The option C suggests that the diluted EPS is USD 7.50. This is incorrect because it assumes that the conversion of the preferred shares is dilutive. However, in this case, the conversion is anti-dilutive as it results in a higher EPS. Therefore, the diluted EPS reported would be the same as the basic EPS, which is USD 7.25.

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.59 Which of the following accounting treatments will *most likely* result in a Deferred Tax Asset (DTA)?

A. Revenue is recognized in the tax return for taxable income before it is recognized in the income statement.

B. Revenue is recognized in the income statement before it is recognized in the tax return for taxable income purposes.

C. Expensive or tax-deductible charges are recognized for tax purposes before they are deducted from the income statement.

A Deferred Tax Asset (DTA) is a tax reduction opportunity a company gets to reduce its future tax bill. It typically arises when a company has paid taxes in advance or has reported higher income to the tax authorities than what is reported in its income statement. This situation can occur due to differences in accounting rules and tax regulations.

Option A describes a situation where revenue is recognized in the tax return for taxable income before it is recognized in the income statement. This means that the company has paid taxes on revenue that it has not yet recognized in its income statement. This creates a DTA because the company will be able to reduce its future tax bill when it finally recognizes this revenue in its income statement. This is in line with the principle of conservatism in accounting, which prefers to recognize expenses and liabilities as soon as possible, but to recognize revenues and assets only when they are assured of being received.

B is incorrect. This option suggests that revenue is recognized in the income statement before it is recognized in the tax return for taxable income purposes. This situation would actually create a Deferred Tax Liability (DTL), not a DTA. A DTL arises when a company has underpaid taxes or has reported lower income to the tax authorities than what is reported in its income statement. This means that the company will have to pay more taxes in the future when it recognizes this revenue in its tax return.

C is incorrect. This option suggests that expenses or tax-deductible charges are recognized for tax purposes before they are deducted from the income statement. This situation would also create a DTL, not a DTA. When expenses are recognized for tax purposes before they are deducted from the income statement, it means that the company has taken a tax deduction for expenses that it has not yet recognized in its income statement. This creates a DTL because the company will have to pay more taxes in the future when it finally recognizes these expenses in its income statement.

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.60 Galactic Hyper is a chain of hypermarkets that sells most of its products for cash, which is why its days of outstanding sales are as low as 22 days. Assuming that the firm's average receivables are $234,000, and the cost of goods sold (COGS) for the 1-year period is $1,245,000, the annual sales of Galactic are *closest* to:

A. 3,882,000

B. 1,410,400

C. 4,880,200

$$\text{Annual sales} = [\frac{365}{\text{Days sales outstanding}} \times \text{Average acc. rec}]$$

By substituting the given values into the formula, we get:

$$\text{Annual sales} = \frac{365}{22} \times \$234,000 = \$3,882,000$$

This calculation shows that the annual sales of Galactic Hyper are closest to $3,882,000, which is the value given in option A.

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.61 Which of the following valuation methods is *least likely* used under IFRS accounting standards?

A. Weighted average.

B. Last in, first-out (LIFO).

C. First in, first-out (FIFO).

The International Financial Reporting Standards (IFRS) is a set of accounting standards developed by an independent, not-for-profit organization called the International Accounting Standards Board (IASB). The goal of IFRS is to provide a global framework for how public companies prepare and disclose their financial statements. Under IFRS, the LIFO method is not permitted for inventory valuation. This is because IFRS views the LIFO method as not reflecting the actual flow of inventory, and it can distort the financial statements by showing outdated inventory costs during times of inflation. Therefore, companies that report under IFRS are prohibited from using the LIFO method.

A is incorrect. The Weighted Average method is indeed allowed under IFRS. This method takes the total cost of items available for sale during the period and divides it by the total number of units available for sale. This gives a weighted average cost per unit. Each time an item is sold, the cost of goods sold is based on the average cost of all items in inventory, not the cost of the specific item sold. This method is accepted under IFRS because it can accurately reflect the cost flow in situations where items in inventory are so intermingled that it becomes difficult to assign a specific cost to an individual unit.

C is incorrect. The First in, first-out (FIFO) method is also permitted under IFRS. FIFO is a method used to calculate the cost of inventory that assumes that the first goods purchased or produced are the first ones sold. This means that the cost of goods sold is based on the cost of the earliest goods purchased or produced, while the cost of ending inventory is based on the cost of the latest goods purchased or produced. This method is accepted under IFRS because it closely matches the actual flow of goods for most businesses.

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.62 In which of the following steps should an analyst *most likely* ensure that a financial statement analysis complies with Code and Standards?

A. Collecting input data.

B. State the purpose and context of the analysis.

C. Developing and communicating conclusions/recommendations.

The step of developing and communicating conclusions/recommendations is the stage where an analyst is most likely to ensure that a financial statement analysis complies with Code and Standards. The reason for this is that when an analyst is developing and communicating their conclusions and recommendations, they are essentially creating a report that will be disseminated to various stakeholders. This report is a critical output of the financial statement analysis process and it is therefore crucial that it adheres to the relevant Code and Standards. These standards are designed to ensure that the analysis is conducted in a manner that is ethical, transparent, and reliable. They also serve to protect the interests of all stakeholders involved, including the analyst, the organization they represent, and the recipients of the report. Therefore, it is at this stage that compliance with these standards is most critical.

A is incorrect. While the collection of input data is an important step in the financial statement analysis process, it is not the stage where an analyst is most likely to ensure compliance with Code and Standards. The collection of input data primarily involves gathering the necessary financial and non-financial information that will be used in the analysis. While it is important that this data is accurate and reliable, the compliance with Code and Standards is not typically a primary concern at this stage. This is because the data collection process does not typically involve the creation of a report or the communication of conclusions and recommendations, which are the key areas where compliance with Code and Standards is most critical.

B is incorrect. Stating the purpose and context of the analysis is also an important step in the financial statement analysis process. However, like the collection of input data, this step does not typically involve the creation of a report or the communication of conclusions and recommendations. Therefore, while it is important that the purpose and context of the analysis are clearly and accurately stated, compliance with Code and Standards is not typically a primary concern at this stage. The main focus at this stage is to set the direction for the analysis and to ensure that it is aligned with the needs and expectations of the stakeholders.

CFA Level 1, Topic 3 – Financial Statement Analysis, Learning Module 1 – Introduction to Financial Statement Analysis, LOS 1a: Describe the steps in the financial statement analysis framework.

Q.63 Which of the following are/is *most likely* included in financial notes and supplementary schedules:

I. Subsequent events, i.e., events that occur after the balance sheet date.
II. Related-party transactions.
III. Operating segment's performance.

IV. Business acquisitions and disposals.

A. II and IV.

B. II, III and IV.

C. I, II, III and IV.

Option C includes all the elements that are most likely included in financial notes and supplementary schedules. These elements are Subsequent events, Related-party transactions, Operating segment's performance, and Business acquisitions and disposals. Let's break down each of these elements for a better understanding.

Subsequent events are significant events that occur between the balance sheet date and the date when financial statements are issued or available to be issued. These events provide additional evidence about conditions that existed at the balance sheet date, affecting the estimates inherent in the process of preparing financial statements. Therefore, they are crucial to be included in the financial notes and supplementary schedules.

Related-party transactions are transactions that occur between two parties that can control the terms of the transaction. These transactions are often scrutinized because of the possibility of conflict of interest. Hence, it is essential to disclose such transactions in the financial notes and supplementary schedules for transparency and fair presentation of financial statements.

Operating segment's performance is another crucial element that is included in the financial notes and supplementary schedules. It provides information about the different business activities a company is involved in and the performance of each of these segments. This information is vital for stakeholders to understand the company's operations and profitability better.

Lastly, Business acquisitions and disposals are significant events that can have a substantial impact on a company's financial position and operations. Therefore, they are also included in the financial notes and supplementary schedules to provide a complete picture of the company's financial health.

A is incorrect. This option only includes Related-party transactions and Business acquisitions and disposals. While these are important elements, they do not provide a complete picture of the information typically included in financial notes and supplementary schedules. Subsequent events and Operating segment's performance are also crucial elements that need to be disclosed.

B is incorrect. This option includes Related-party transactions, Operating segment's performance, and Business acquisitions and disposals. However, it misses out on Subsequent events, which are significant events that occur after the balance sheet date and provide additional evidence about conditions that existed at the balance sheet date. Therefore, this option does not provide a complete list of elements included in financial notes and supplementary schedules.

CFA Level 1, Topic 4 – 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.64 To comply with the Global Investment Performance Standards, verification is:

A. voluntary and must be performed by a third party.

B. obligatory and must be performed by a third party.

C. obligatory and must not be performed by a third party.

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 goal of GIPS is to promote transparency and fair competition among investment firms worldwide. Verification is a process that ensures an investment firm's compliance with GIPS. According to GIPS, verification is voluntary and must be performed by a third party. This is to ensure objectivity and credibility in the verification process. The third party, usually an independent verifier, reviews the firm's policies and procedures for compliance with GIPS standards. They also examine whether the firm has complied with these policies and procedures in practice and whether the firm's presentation of its investment performance complies with GIPS standards.

Option A accurately states that verification is voluntary and must be performed by a third party. This is in line with the GIPS guidelines which state that verification is not mandatory but if done, it should be carried out by an independent third party to ensure impartiality and credibility.

B is incorrect. It suggests that verification is obligatory and must be performed by a third party. While the second part of the statement is correct, the first part is not. GIPS does not make verification obligatory. It is up to the investment firm to decide whether or not to undergo the verification process. The purpose of making verification voluntary is to allow firms the flexibility to choose whether they want to bear the costs and efforts associated with the verification process.

C is incorrect. It states that verification is obligatory and must not be performed by a third party. Both parts of this statement are incorrect. As mentioned earlier, verification is not obligatory according to GIPS. Furthermore, if a firm chooses to undergo verification, it must be performed by a third party. This is to ensure that the verification process is objective and credible. If the verification were to be performed by someone within the firm, it could lead to conflicts of interest and potential bias in the verification process.

CFA Level 1, Topic 10 – Ethics, Learning Module 4 – Introduction to the Global Investment Performance Standards (GIPS), LOS 4e: Describe the concept of independent verification.

Q.65 Chantal Pierre owns a large investment fund in Swami, a country with an emerging market. She is Swami's largest dealer of developed market equities. When Pierre places a buy order for her fund, the price of developed market equities significantly rises prohibiting many local investment funds from purchasing the securities. Similarly, when Pierre places a sell order, equity prices significantly decline. In this way, Pierre always manages to obtain the best price for her transactions. Many traders have complained that Pierre is exploiting her position in developed market equities and that her fund's frequent trades have significantly increased equity market volatility over the past year. Are Pierre's actions in violation of the CFA Institute Standards of Professional Conduct?

A. No.

B. Yes, she is front-running the fund's trades.

C. Yes, she is manipulating the market using her dealer.

Pierre's actions do not violate the CFA Institute Standards of Professional Conduct. According to Standard II(B): Market Manipulation, members and candidates are prohibited from engaging in practices that artificially inflate trading volume with the intent to mislead market participants. In Pierre's case, she is not manipulating the market through her fund's trades. Her dominant position in the market naturally has a significant effect on the market, regardless of the type of trades she undertakes. Her intent is not to mislead the market, but rather to secure the best price for her transactions. This is a natural consequence of her large investment fund and her position as Swami's largest dealer of developed market equities. Her actions, while they may increase market volatility, are not in violation of the CFA Institute Standards of Professional Conduct because they do not involve misleading market participants or artificially inflating trading volume.

B is incorrect. The accusation of front-running implies that Pierre is using her knowledge of pending orders from her fund to trade ahead of these orders and profit from the price changes that result. However, there is no evidence in the scenario provided that Pierre is engaging in such behavior. She is placing orders for her fund, not for her personal account, and there is no indication that she is using her position to gain personal advantage at the expense of her fund or other market participants.

C is incorrect. Market manipulation involves practices that artificially inflate trading volume with the intent to mislead market participants. While Pierre's actions do have a significant effect on the market due to her dominant position, there is no evidence that she is intentionally manipulating the market. She is not artificially inflating trading volume or misleading market participants. Her actions are a result of her large investment fund and her position as Swami's largest dealer of developed market equities, not a deliberate attempt to manipulate the market.

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 Which of the following is the *least* severe disciplinary sanction that the Designated Officer may take as a result of an investigation?

A. Public censure.

B. Suspension of the CFA® designation.

C. Revocation of the CFA® designation.

The question asks for the least severe disciplinary sanction that the Designated Officer may take as a result of an investigation. In the context of disciplinary sanctions, severity is often determined by the impact on the individual's professional status and reputation.

Public censure, which is the action of expressing severe disapproval of someone, typically in a formal statement, is considered the least severe disciplinary sanction. This is because, while it does involve a public expression of disapproval, it does not directly impact the individual's ability to practice their profession. It is a form of reprimand that aims to discourage the individual from repeating the behavior, but it does not strip them of their professional designation or suspend their ability to use it.

B is incorrect. Suspension of the CFA® designation is a more severe disciplinary sanction than public censure. Suspension involves temporarily revoking the individual's right to use the CFA® designation. This means that for the duration of the suspension, the individual cannot represent themselves as a CFA® charterholder. This can have significant implications for their professional status and career, making it a more severe sanction than a public censure.

C is incorrect. Revocation of the CFA® designation is the most severe disciplinary sanction. Revocation is a permanent removal of the individual's right to use the CFA® designation. This means that the individual can no longer represent themselves as a CFA® charterholder at all. This can have a profound impact on their professional status and career, making it the most severe sanction.

CFA Level 1, Topic 10 – Ethics, Learning Module 2 – Code of Ethics and Standards of Professional Conduct, LOS 2a: Describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards.

Q.67 Conduct that constitutes a violation of the CFA Institute Standards of Professional Conduct concerning 'Conduct as Members and Candidates in the CFA Program' *most likely* includes:

A. cheating on an MBA exam.

B. soliciting employer clients before departing.

C. not following security measures implemented for the CFA exam.

The CFA Institute Standards of Professional Conduct specifically addresses the conduct of members and candidates in the CFA Program. The Standards require all members and candidates to adhere to the security measures implemented for the CFA exam. These measures are put in place to ensure the integrity and credibility of the exam and the certification process. Violating these measures, therefore, constitutes a direct violation of the Standards. This could include actions such as attempting to bring unauthorized materials into the exam venue, copying from another candidate, or attempting to impersonate another candidate. Such actions undermine the fairness and validity of the exam, and are therefore not tolerated by the CFA Institute.

A is incorrect. While cheating on any exam is unethical and should be discouraged, the CFA Institute Standards of Professional Conduct specifically pertain to conduct in relation to the CFA Program. Therefore, cheating on an MBA exam, while wrong, does not constitute a violation of the Standards. The Standards are designed to uphold the integrity of the CFA Program and the investment profession, and do not extend to other academic or professional programs. It is important to note, however, that such behavior could still have serious consequences in other contexts, including academic penalties and damage to one's professional reputation.

B is incorrect. The option states "soliciting employer clients before departing." This conduct would indeed be unethical and could potentially violate other standards concerning professional conduct, such as those related to duties to employers or clients. However, it does not specifically violate the Standard concerning 'Conduct as Members and Candidates in the CFA Program.' This Standard primarily addresses conduct in relation to the CFA exam and the certification process, rather than broader professional conduct. Nonetheless, it is important for all members and candidates to act ethically and professionally in all aspects of their work, including respecting the interests of their employers and 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.68 Chris Heinz works for a brokerage company. On Tuesday, one of his analysts mails all investors a recommendation to buy the stock of AERD. The following day, Heinz receives a call from one of his clients to sell AERD at market price. What should he *most likely* do?

A. Accept the sell order.

B. Not accept the order because it's contrary to the firm's recommendation.

C. Advise the customer of the change in recommendation before accepting the order.

Option C aligns with the ethical standards of fair dealing in the finance industry. According to Standard III(B) – Fair Dealing, a financial professional must 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 scenario, Chris Heinz, working for a brokerage company, receives a sell order from a client for a stock that his firm has recently recommended for purchase. Before executing the order, Heinz should ensure that the client is aware of the firm's change in recommendation. This is crucial to maintain transparency and fairness in dealings. If Heinz were to execute the order without informing the client about the change in recommendation, he would be violating the Standard III(B) – Fair Dealing. This standard is designed to protect the interests of clients and maintain the integrity of the financial industry.

A is incorrect. Accepting the sell order without informing the client about the change in recommendation would be a violation of the Standard III(B) – Fair Dealing. This standard requires financial professionals to deal fairly and objectively with all clients. By accepting the sell order without informing the client about the change in recommendation, Heinz would not be dealing fairly with the client. The client has the right to be informed about any changes in the firm's recommendation before making a decision to sell the stock.

B is incorrect. It's contrary to the firm's recommendation is not a fair practice. The client has the right to make their own investment decisions, even if they are contrary to the firm's recommendation. As a financial professional, Heinz's role is to provide the client with the most accurate and up-to-date information to help them make informed decisions. Refusing to accept the order because it contradicts the firm's recommendation would be a violation of the client's rights and the principles of fair dealing.

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.69 Jared Blain is a Los Angeles stockbroker and analyst. He recently used a discounted cash flow (DCF) model to analyze stocks in the semiconductor industry. After publishing his results on his blog, he calls one of his best clients and tells him to buy YYU since it is undervalued by 50% without mentioning the model he used. Blain has *most likely* violated the Standards because:

A. his model is probably wrong.

B. he does not distinguish between opinion and fact.

C. he cannot work as a stockbroker and analyst at the same time.

Jared Blain, a Los Angeles stockbroker and analyst, has most likely violated the Standards due to his failure to distinguish between opinion and fact when communicating with his clients. This is a violation of Standard V(B) – Communication with Clients and Prospective Clients. The Standards require members to provide thorough communication and to clearly separate facts from opinions. In this case, Blain has failed to do so. He has presented his opinion, based on his analysis using a discounted cash flow (DCF) model, as a fact to his client. He stated that the stock of YYU is undervalued by 50% without mentioning the model he used for his analysis. This could potentially mislead his client as he did not provide the basis for his opinion. It is important to note that while research based on past circumstances can be verified as fact, projections of future performances, such as the one made by Blain, are the basis of opinions.

A is incorrect. The Standards do not require the use of a specific model for analysis. Instead, they require members to disclose to clients and prospective clients the basic format and general principles of the investment processes used to analyze investments, select securities, and construct portfolios. In this case, Blain should have disclosed the use of the DCF model in his analysis. The lack of disclosure is a violation of the Standards, not the use of the model itself.

C is incorrect. The Standards are designed to promote ethical conduct and professional responsibility, not to restrict the roles that a member can hold. Therefore, Blain's dual role as a stockbroker and analyst is not a violation of the Standards. His violation lies in his failure to distinguish between opinion and fact when communicating with his clients, not in his professional roles.

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.70 Martina Hinges, CFA, is a portfolio manager. In her free time, Hinges reviews the investment of her friend Serena Walls. Hinges did not charge any fees for Walls. According to the standard of professional conduct, did Hinges violate her duty of loyalty to her employer?

A. No, because Hinges did not charge any fees.

B. No, because this was just a one-time exercise.

C. Yes, because Hinges used her expertise for someone other than her employer.

According to Standard IV(A) – Loyalty, a member of the CFA Institute should disclose independent practice taken for additional compensation. In this case, Martina Hinges, a portfolio manager and a CFA, reviewed the investment of her friend Serena Walls in her free time. It is important to note that Hinges did not receive any compensation for this service. Therefore, she did not violate the standard of professional conduct. The standard does not prohibit members from using their expertise outside their employment as long as it does not conflict with their duty to their employer and they are not compensated for it. In this scenario, Hinges did not receive any compensation and hence, she did not violate any standard.

B is incorrect. The frequency of the exercise does not determine whether a violation occurred or not. The standard does not specify that a one-time exercise is exempt from the rule. The key factor here is whether Hinges received compensation for her service, which she did not.

C is incorrect. The standard does not prohibit a member from using their expertise for someone other than their employer. The key factor here is whether the member received compensation for their service and whether it conflicts with their duty to their employer. In this case, Hinges did not receive any compensation and her actions did not conflict with her duty to her employer.

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.71 Concerning referral fees, which of the following statements is most likely accurate?

A. A member is required to disclose only the fees he receives.

B. A member is required to disclose only the fees that he pays.

C. A member is required to disclose both fees received as well as paid.

Transparency and full disclosure are key principles in maintaining trust and integrity in financial transactions. Members and Candidates are obligated to disclose to their employer, clients, and prospective clients, any compensation, consideration, or benefit received from or paid to others for the recommendation of products or services. This is to ensure that all parties involved are fully aware of any potential conflicts of interest and can make informed decisions. It also promotes fairness and equality in the financial marketplace.

A is incorrect. This option not accurate as it only covers half of the disclosure requirement. While it is important for a member to disclose the fees he receives, it is equally important for him to disclose the fees that he pays. This is because both types of fees could potentially influence the member's recommendations and decisions, and thus, could create conflicts of interest. By only disclosing the fees received, the member would not be providing a complete picture of his financial transactions, which could mislead clients and prospective clients.

B is incorrect. This option only covers half of the disclosure requirement. While it is important for a member to disclose the fees he pays, it is equally important for him to disclose the fees he receives. This is because both types of fees could potentially influence the member's recommendations and decisions, and thus, could create conflicts of interest. By only disclosing the fees paid, the member would not be providing a complete picture of his financial transactions, which could mislead clients and prospective clients.

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.72 Tom Philips, CFA is an investment manager at VGF Investments. Previously he worked at RTF Asset Managers, where he brought some of RTF's biggest current clients. Since joining VGF Investments, Tom has been contacting RTF Asset Manager's clients from a contact list he had saved while still working at RTF, some of whom are clients that Tom has brought to RTF. Under the CFA Code and Standards, Tom's actions *most likely*:

A. do not violate CFA Code and Standards since he is contacting the clients he brought to RTF

B. violated CFA Code and Standards by using his former employer's material to contact the prospective clients

C. do not violate CFA Code and Standards since he used public information to contact VGF clients

Tom Philips, a CFA and investment manager at VGF Investments, has violated Standard IV(A) of the CFA Code and Standards on Duties to Employers, Loyalty. This violation occurred when he used his former employer's material, specifically a contact list, to reach out to RTF Asset Manager's clients. The contact list is considered proprietary information of RTF Asset Managers and should not be used without explicit permission from the company. This is irrespective of whether Tom brought some of these clients to RTF during his tenure there. The CFA Code and Standards emphasize the importance of loyalty to one's employer and respect for their proprietary information. This includes client lists, strategic plans, and other confidential information that could provide a competitive advantage. Using such information without consent is a clear violation of these standards.

A is incorrect. This option assumes that Tom's actions are justified because he is contacting clients he brought to RTF. However, the CFA Code and Standards do not make exceptions based on who brought the client to the company. The key issue here is the use of proprietary information without consent, which is a violation of Standard IV(A) on Duties to Employers, Loyalty. Even if Tom brought these clients to RTF, he is not entitled to use the contact list without RTF's permission. This is because the contact list is considered proprietary information of RTF, and using it without consent is a breach of loyalty to the former employer.

C is incorrect. This option incorrectly assumes that Tom used public information to contact VGF clients. However, the question clearly states that Tom used a contact list he had saved while working at RTF. This is not public information, but proprietary information of RTF. Using such information without consent is a violation of Standard IV(A) of the CFA Code and Standards on Duties to Employers, Loyalty. Even if the clients were public knowledge, the contact list is not. Therefore, using it without RTF's permission is a clear violation of the CFA Code and 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./em>

Q.73 Roger Timmons and Mike Ross are two directors for Pan-Asia Securities. They are in dispute over the use of the CFA logo designation. Timmons is very proud of the fact that everyone in their organization is a CFA charter holder. He wants to incorporate the CFA logo within the firm's letterhead. Ross, however, believes this would be a violation of CFA Standards. Who is *most likely* correct?

A. Neither Timmons nor Ross is correct.

B. Ross is correct. The CFA logo is to be used by individuals, not by a firm.

C. Timmons is correct. The firm can incorporate the CFA logo into its collateral materials so long as all employees are CFA members.

The CFA Institute's Standards of Professional Conduct clearly state that the CFA designation is to be used by individuals, not by firms. This is because the CFA designation is a testament to the individual's knowledge and competence in the field of finance and investment. It is a recognition of the individual's commitment to ethics and professional excellence. Therefore, using the CFA logo in a firm's letterhead would be misleading as it implies that the firm, as an entity, has earned the CFA designation, which is not possible. The CFA designation can only be earned by individuals who have passed the CFA exams and have met the work experience requirements. Hence, Ross's assertion that incorporating the CFA logo within the firm's letterhead would be a violation of CFA Standards is correct.

A is incorrect. As explained above, Ross's statement is in line with the CFA Institute's Standards of Professional Conduct. Therefore, it is incorrect to say that neither Timmons nor Ross is correct.

C is incorrect. Even if all employees of a firm are CFA charter holders, the firm itself cannot use the CFA logo. This is because the CFA designation is a testament to the individual's knowledge and competence, not the firm's. Therefore, using the CFA logo in the firm's collateral materials would be misleading and 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.74 Which of the following statements is *least likely* accurate?

A. When the decision-making process focuses on short-term factors, the likelihood of ethical conduct increases.

B. External factors, such as environmental impacts and cultural events, are the greatest indicators of ethical behavior.

C. Situational influences such as environmental impacts and cultural events are the greatest indicators of ethical behavior.

Focusing on short-term factors in the decision-making process is less likely to increase ethical conduct. This is because such a focus can lead to a disregard for the long-term consequences of actions. In the context of finance, this can be particularly detrimental as it can lead to decisions that prioritize immediate gains over sustainable growth and ethical considerations. For instance, a company might choose to cut corners in order to boost short-term profits, ignoring the potential long-term impacts such as damage to its reputation, legal penalties, or environmental harm. This approach is contrary to the principles of ethical conduct, which emphasize the importance of considering the broader implications of decisions and acting in a manner that is responsible and sustainable.

B is incorrect. Ethical behavior is complex and multifaceted, and it is influenced by a range of factors, including personal values, societal norms, and legal regulations, in addition to external factors. Therefore, while external factors can play a role in shaping ethical behavior, it is an oversimplification to state that they are the greatest indicators of such behavior.

C is incorrect. Similar to option B, while situational influences such as environmental impacts and cultural events can influence ethical behavior, they are not necessarily the greatest indicators of such behavior. Ethical behavior is influenced by a range of factors, and while situational influences can play a role, they are just one piece of the puzzle. It is important to consider the broader context, including personal values, societal norms, and legal regulations, when assessing ethical behavior.

CFA Level 1, Topic 10 – Ethics, Learning Module 1 – Ethics and Trust in the Investment Profession, LOS 1f: Identify challenges to ethical behavior.

Q.75 Which of the following is *least likely* an objective of the GIPS standards?

A. Firm-wide compliance

B. Instilling investor confidence.

C. Promoting fair, global competition among investment firms.

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 fair, ethical, and transparent practices in the investment industry, not to enforce firm-wide compliance. While firm-wide compliance is a requirement under GIPS, it is not an objective. The objective of GIPS is to ensure that the investment performance of a firm is presented in a manner that is complete, fair, and comparable to other firms. This is to ensure that the investors can make informed decisions based on the accurate and consistent presentation of investment performance.

While firm-wide compliance is a requirement under GIPS, it is not an objective. The GIPS standards are not designed to enforce compliance, but rather to provide a framework for ethical and fair practices in the investment industry. The standards are voluntary and are based on the principles of fair representation and full disclosure. They do not have any enforcement mechanism or penalties for non-compliance. Therefore, firm-wide compliance, while important, is not an objective of the GIPS standards.

B is incorrect. Instilling investor confidence is indeed one of the objectives of the GIPS standards. The standards aim to promote transparency, consistency, and fairness in the presentation of investment performance. By adhering to these standards, investment firms can instill confidence in investors by demonstrating their commitment to ethical practices and accurate performance reporting.

C is incorrect. Promoting fair, global competition among investment firms is also one of the objectives of the GIPS standards. The standards aim to create a level playing field for all investment firms, regardless of their size or location. By adhering to the GIPS standards, firms can compete on an equal footing, based on the quality of their investment strategies and the accuracy of their performance reporting.

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

Q.76 A mutual fund follows a strategy where it invests in Treasury securities and extremely risky securities. Treasury investments are made such that 95% of the fund value should be recovered from the treasury securities at the end of the investment horizon. The mutual fund is planning to include one of the following statements in its communication with its clients:

I. Since Treasury securities back the fund, the investors will get guaranteed returns.
II. There is no default risk on the investments made by the fund.

Which of the statements is *most likely* in violation of Standard I(C) – Misrepresentation

A. statement I.

B. statement II.

C. Both statements I & II.

Both statements violate Standard I(C) – Misrepresentation. Misrepresentation refers to any false or misleading statement about investment analysis, recommendations, actions, or other professional activities. In this case, both statements are misleading to the investors.

A is incorrect. Statement I suggests that the fund can guarantee returns because it is backed by Treasury securities. However, this is a misrepresentation. While it is true that Treasury securities are considered safe investments, the fund also invests 5% of its value in extremely risky securities. This means that the overall returns of the fund are not guaranteed. The performance of the risky securities can negatively impact the overall returns of the fund. Therefore, suggesting that the investors will get guaranteed returns is misleading and a violation of Standard I(C).

B is incorrect. Statement II suggests that there is no default risk on the investments made by the fund. This is also a misrepresentation. As mentioned earlier, the fund invests 5% of its value in extremely risky securities. These securities carry a high default risk. Therefore, suggesting that there is no default risk on the investments made by the fund is misleading and a violation of Standard I(C).

It is important to note that even though the majority of the fund's value is invested in Treasury securities, which are considered safe, there could theoretically be default risk as well on these investments. This further emphasizes the misleading nature of both statements I and II.

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 Robert Galvin, CFA, is a money manager. He also takes care of choosing assets for Retire Smart's pension fund. The director of Retire Smart's Pension Fund directs Galvin to use a particular broker for the trade in the pension fund with the intention of obtaining research with soft dollars earned from the broker. Galvin follows the instructions of the director as there is no significant difference in the price and execution. Galvin has *most likely*:

A. Violated the Standard III(A) – Loyalty Prudence and Care.

B. Not violated any standard if the research benefits Retire Smart.

C. Not violated any standard if the research benefits the plan beneficiaries.

Robert Galvin, as a money manager, has a fiduciary duty towards the pension plan participants. This means that he is obligated to act in the best interest of the plan participants. In this scenario, Galvin is instructed by the director of Retire Smart's Pension Fund to use a specific broker for the trade in the pension fund. The intention behind this is to obtain research with soft dollars earned from the broker. Galvin follows these instructions as there is no significant difference in the price and execution. If the research obtained from the soft dollars benefits the plan participants, Galvin is not in violation of any standard. This is because his actions are in line with his fiduciary duty to act in the best interest of the plan participants.

A is incorrect. According to Standard III(A), members are required to act for the benefit of their clients and place their clients' interests before their employer's or their own interests. In this case, Galvin has not violated this standard. He has followed the instructions of the director, and there is no indication that he has placed his own interests or those of his employer above those of the plan participants. The research obtained from the soft dollars is intended to benefit the plan participants, which is in line with Galvin's fiduciary duty.

B is incorrect. If the research obtained from the soft dollars benefits Retire Smart, rather than the plan participants, Galvin would be in violation of the standard. The research should benefit the plan beneficiaries and not the Retire Smart firm. If the research benefits the firm rather than the plan participants, Galvin would be placing the interests of his employer above those of his clients, which would be a violation of his fiduciary duty. Therefore, Galvin would violate the standard if the research benefits Retire Smart rather than the plan beneficiaries.

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 Illeana Cruze, CFA, is a portfolio manager at Alpha Sense and manages a mutual fund and a pension plan. On receipt of proxies for the mutual fund, Cruze hands it over to her administrative assistant, Tom Hillman. Cruze says that she does not have enough time to handle proxies herself because of other commitments. When the proxies are for stocks owned by the pension plan, she asks Hillman to send it to the plan's sponsor. Which of the following statements is *most likely* accurate?

A. Cruze’s policy is not a violation.

B. Cruze’s policy on both the mutual fund as well as pension plan proxies is a violation.

C. Cruze’s policy on mutual fund proxies is a violation, but her policy on pension plan proxies is not a violation.

According to the CFA Institute's Standards of Professional Conduct, investment professionals have a fiduciary duty to act in the best interests of their clients. This includes the responsibility to vote proxies in a manner that is in the best interest of the client. In the case of Illeana Cruze, she has violated this standard by delegating the voting of proxies to her administrative assistant, Tom Hillman, and by directing that proxies for stocks owned by the pension plan be sent to the plan's sponsor. This is a clear violation of her fiduciary duty to act in the best interest of her clients.

A is incorrect. As a CFA charterholder and portfolio manager, Cruze has a fiduciary duty to act in the best interest of her clients. This includes the responsibility to vote proxies in a manner that is in the best interest of the client. By delegating this responsibility to her administrative assistant and directing that proxies for stocks owned by the pension plan be sent to the plan's sponsor, she is violating this duty. Therefore, her policy is indeed a violation of the CFA Institute's Standards of Professional Conduct.

C is incorrect. Both policies are violations of the CFA Institute's Standards of Professional Conduct. In the case of the mutual fund proxies, Cruze is violating her fiduciary duty by delegating the voting of proxies to her administrative assistant. In the case of the pension plan proxies, she is violating her fiduciary duty by directing that the proxies be sent to the plan's sponsor, rather than voting them in the best interest of the beneficiaries. Therefore, both policies are violations.

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 Which of the following is *least likely* a misleading practice that led to the development of the Global Investment Performance Standards (GIPS)?

A. Survivorship bias.

B. Representative accounts.

C. Ensuring consistent data.

The Global Investment Performance Standards (GIPS) were developed to address misleading practices in the investment industry. Ensuring consistent data, however, is not a misleading practice but rather an objective of the GIPS standards. The GIPS standards aim to ensure fair representation and full disclosure of investment performance. Ensuring consistent data is a part of this objective, as it helps to provide a clear and accurate representation of investment performance. This is achieved by requiring firms to use consistent methodologies and data sources when calculating and presenting their performance data. Therefore, ensuring consistent data is not a misleading practice that led to the development of the GIPS standards, but rather a key objective of these standards.

A is incorrect. Survivorship bias is indeed a misleading practice that led to the development of the GIPS standards. Survivorship bias refers to the practice of presenting an average performance history that excludes portfolios whose poor performance led to their termination. This can give a misleading impression of a firm's overall performance, as it only includes the portfolios that have 'survived' and excludes those that have not. This practice can lead to an overestimation of a firm's performance and underestimation of its risk, which is why it is considered misleading and why it was one of the reasons for the development of the GIPS standards.

B is incorrect. Representative accounts is another misleading practice that led to the development of the GIPS standards. This practice involves using the top-performing portfolio to represent the firm’s overall investment results for a specific mandate. This can give a misleading impression of a firm's overall performance, as it only includes the best-performing portfolio and excludes the others. This practice can lead to an overestimation of a firm's performance and underestimation of its risk, which is why it is considered misleading and why it was one of the reasons for the development of the GIPS standards.

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

Q.80 Donna Simpson had an exceptional performance year. During a meeting where Simpson is updating the client’s investment policy statement (IPS), one of her clients offers her two NBA finals first-row tickets as a reward. Simpson’s best course of action is to:

A. reject the offer.

B. receive consent from her employer before accepting the offer.

C. accept the offer as long as she notifies her employer accordingly.

Option B aligns with the ethical guidelines set by the financial industry. These guidelines stipulate that members and candidates may accept bonuses or gifts from clients, but they must first disclose them to their employer. This is to ensure transparency and to avoid any potential conflicts of interest. The acceptance of gifts in a client relationship is deemed less likely to affect a member's or candidate's objectivity and independence than gifts in other situations. Therefore, Donna Simpson should receive consent from her employer before accepting the offer of NBA finals first-row tickets from her client.

A is incorrect. The financial industry does not outright prohibit the acceptance of gifts or bonuses from clients. The key factor is that these gifts or bonuses must be disclosed to the employer before acceptance. This is to ensure that there is no conflict of interest and that the professional's objectivity and independence are not compromised. Therefore, Donna Simpson does not need to outright reject the offer, but rather, she should disclose it to her employer and seek their consent before accepting.

C is incorrect. Merely notifying the employer about the gift or bonus after acceptance is not sufficient. The ethical guidelines stipulate that the employer's consent must be obtained before accepting any gifts or bonuses from clients. This is to ensure transparency and to avoid any potential conflicts of interest. Therefore, Donna Simpson should not accept the offer before receiving consent from her employer, even if she plans to notify them afterwards.

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.81 Which of the following is *least likely* required to be disclosed according to Standard VI (A) – Disclosure of Conflicts?

A. Real Estate holdings.

B. Directorship in a company.

C. Beneficial Ownership of Securities.

T According to Standard VI (A) – Disclosure of Conflicts, the disclosure of real estate holdings is not always required. This is because real estate holdings are only required to be disclosed if they are likely to impair the independence and objectivity of the Member. This means that if a member's real estate holdings do not pose a conflict of interest or compromise their ability to make objective decisions, there is no need for them to be disclosed. This is in contrast to other types of assets or interests, which may inherently pose a conflict of interest and thus require disclosure.

B is incorrect. Holding a directorship in a company inherently poses a potential conflict of interest. As a director, a member may have access to inside information or may be in a position to make decisions that could benefit the company at the expense of clients. Therefore, to maintain transparency and uphold ethical standards, it is necessary for a member to disclose if they hold a directorship in a company.

C is incorrect. Owning securities in a company can pose a conflict of interest. If a member owns securities in a company, they may be inclined to make decisions that benefit that company, potentially at the expense of clients. Therefore, to maintain transparency and uphold ethical standards, it is necessary for a member to disclose if they have beneficial ownership of securities.

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.82 As a CFA member, failure to return the annual professional conduct statement will *most likely* lead to:

A. punishable by criminal law.

B. grounds for a summary suspension.

C. not grounds for a summary suspension.

According to the CFA Institute's Professional Conduct Program, failure to return the annual professional conduct statement can indeed lead to a summary suspension. The annual professional conduct statement is a crucial part of the CFA Institute's efforts to uphold the highest standards of professional conduct among its members. It is a tool used to assess a member's compliance with the CFA Institute's Code of Ethics and Standards of Professional Conduct. Failure to return this statement is seen as a serious violation of a member's professional responsibilities and can lead to a summary suspension, which is a temporary suspension of a member's CFA Institute membership and the right to use the CFA designation.

A is incorrect. The CFA Institute is a professional organization, not a law enforcement or judicial body. Therefore, it does not have the authority to impose criminal penalties. While the CFA Institute can enforce its own rules and regulations, including the Code of Ethics and Standards of Professional Conduct, it cannot prosecute members under criminal law. Any criminal actions taken against a member would be handled by the appropriate legal authorities, not the CFA Institute.

C is incorrect. As mentioned earlier, failure to return the annual professional conduct statement is indeed grounds for a summary suspension according to the CFA Institute's Professional Conduct Program. This option contradicts the established rules and regulations of the CFA Institute and is therefore incorrect.

CFA Level 1, Topic 10 – Ethics, Learning Module 2 – Code of Ethics and Standards of Professional Conduct, LOS 2a: Describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards.

Q.83 Mosaic theory is defined as an analyst combining information that is:

A. non-material, non-public, and material public.

B. non-material, public and, material non-public.

C. material, non-public and, non-material public.

The mosaic theory is a method used by financial analysts to gather information about a company's value. This theory involves the combination of non-material, non-public, and material public information to make investment recommendations and decisions. This is why option A is the correct answer.

Non-material information refers to data that does not significantly impact a company's stock price. Non-public information is data that is not readily available to the public. Material public information, on the other hand, is data that is available to the public and can significantly impact a company's stock price. The combination of these types of information allows an analyst to make a more informed decision about the value of a company and its potential for investment.

By using the mosaic theory, an analyst can gather a comprehensive view of a company's financial situation without relying on insider information, which is illegal to use for investment decisions. This method allows for a more ethical and legal approach to investment analysis.

B is incorrect. This option suggests the combination of non-material, public, and material non-public information. However, using material non-public information for investment decisions is considered insider trading, which is illegal.

Using public non-material information would not significantly impact the stock price, and using material non-public information would be illegal. Therefore, this combination of information would not be beneficial or legal for an analyst to use when making investment decisions.

C is incorrect. This option suggests the combination of material, non-public, and non-material public information. Similar to option B, this option also suggests the use of material non-public information, which is considered insider trading.

Using non-material public information would not significantly impact the stock price, and using material non-public information would be illegal. Therefore, this combination of information would not be beneficial or legal for an analyst to use when making investment decisions. Furthermore, this option does not accurately represent the mosaic theory, which involves the combination of non-material, non-public, and material public information.

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.84 To assure fair dealing, members and candidates should *most likely* issue an investment recommendation:

A. to all its clients first, then within the firm.

B. simultaneously within the firm and to all its clients.

C. simultaneously to suitable clients and within the firm.

The Standards of Practice Handbook encourages simultaneous dissemination within the firm and all clients to ensure fair dealing. The rationale behind this is to maintain transparency and fairness in the process of issuing investment recommendations. By doing so, all parties involved, both within the firm and among its clients, receive the information at the same time, thereby eliminating any potential for unfair advantage or preferential treatment. This practice also helps to maintain the integrity of the investment process and fosters trust among clients and within the firm.

A is incorrect. This option suggests that investment recommendations should be issued to all clients first, then within the firm. This approach could potentially lead to a breach of fairness and transparency. If the firm's clients receive the information before the firm's internal stakeholders, it could create a situation where the firm's interests are not adequately represented or considered. Furthermore, it could lead to potential conflicts of interest, as the firm's clients could potentially act on the information before the firm has had a chance to fully assess the implications of the recommendation. This could undermine the integrity of the investment process and erode trust within the firm.

C is incorrect. This option suggests that investment recommendations should be issued simultaneously to suitable clients and within the firm. While this approach may seem to address the issue of fairness, it introduces another problem: the potential for discrimination among clients. By only issuing recommendations to 'suitable' clients, the firm could be seen as favoring certain clients over others, which could lead to accusations of unfair treatment. Furthermore, the term 'suitable' is subjective and could be interpreted in various ways, potentially leading to inconsistencies in how the recommendations are disseminated. This could further erode trust among clients and within the firm.

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.85 Laura Elliot is a broker at House gate, a broker-dealer firm. She undertakes trades on behalf of clients with a high net worth. She discovers that one of her clients has engaged in portfolio funds embezzlement, which classifies as an illegal activity under domestic trading regulations. To comply with the CFA Institute Standards of Professional Conduct, Elliot's preliminary course of action would *most appropriately* be to:

A. request for a different assignment.

B. report the violation to her supervisor.

C. report the violation to regulatory authorities.

According to the CFA Institute Standards of Professional Conduct, when a professional becomes aware of any illegal activity, the first step should be to report the violation to their supervisor or the firm's compliance department. In this case, Laura Elliot, being a broker at House gate, a broker-dealer firm, should report the portfolio funds embezzlement by her client to her supervisor. This is because the supervisor or the compliance department is in a better position to handle such situations and take appropriate actions. They have the authority and the responsibility to deal with such issues and can take the necessary steps to stop the illegal activity and prevent further violations.

A is incorrect. Simply requesting for a different assignment does not address the issue at hand. It is not enough for Laura to disassociate herself from the client's account if she becomes aware of any illegal activity. As a professional, she has a responsibility to report such violations and ensure that appropriate actions are taken to stop the illegal activity. Simply changing the assignment would not solve the problem, but rather it would just pass the problem onto someone else. Therefore, option A is not the most appropriate course of action for Laura.

C is incorrect. While it might seem logical to report the violation to regulatory authorities, according to the CFA Institute Standards of Professional Conduct, this is not the first step that should be taken. Members and candidates are not required to report violations to governmental or regulatory organizations in the absence of any regulations. The initial course of action should be to report the violation to the supervisor or the firm's compliance department. Only if no action is taken after reporting the violation to the supervisor or if the violation continues, then it might be appropriate to report the violation to regulatory authorities. Therefore, option C is not the most appropriate initial course of action for Laura.

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.86 Jason Gilbert, C.F.A., is an exam grader for the CFA Program. He also works as an independent research analyst. When asked about his experience as a grader and theCFA® Program's scope in the financial market, Gilbert makes the following comments: Comment 1: "Although results for the CFA exam are yet to be released, pass rates will be the lowest across all levels." Comment 2: "The CFA program equips candidates to be qualified enough to deal with a broad range of real-life topics, including but not limited to financial analysis, portfolio management, quantitative techniques, and corporate finance." Which comment *most likely* represents a violation of the CFA Institute Standards of Professional Conduct?

A. Comment 1 only.

B. Comment 2 only.

C. Both of the comments.

Comment 1 represents a violation of the CFA Institute Standards of Professional Conduct, specifically the standard relating to conduct as members and candidates in the CFA program. Jason Gilbert, as a grader for the CFA exams, is privy to confidential information about the exams, including the pass rates. The CFA Institute Standards of Professional Conduct require that all members and candidates maintain the confidentiality of the CFA exam. This includes not disclosing information about pass rates before the official release of exam results. By stating that "pass rates will be the lowest across all levels" before the results are officially released, Gilbert is sharing confidential information with the public, which is a clear violation of the standards.

B is incorrect. Comment 2 does not represent a violation of the CFA Institute Standards of Professional Conduct. In this comment, Gilbert is simply stating his opinion about the scope and benefits of the CFA Program. He states that the program equips candidates with the skills to deal with a broad range of real-life topics, including financial analysis, portfolio management, quantitative techniques, and corporate finance. This comment is factual and does not disclose any confidential information about the CFA Program or its exams.

C is incorrect. As explained above, only Comment 1 represents a violation of the CFA Institute Standards of Professional Conduct. Comment 2 does not violate any standards. Therefore, it is not correct to say that both comments represent a violation of the standards. The CFA Institute Standards of Professional Conduct are designed to ensure that members and candidates act in a professional and ethical manner. Violations of these standards, such as the one committed by Gilbert in Comment 1, undermine the integrity of the CFA Program and the financial industry as a whole.

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 Sandra Filner works for a firm that's been actively managing investments since 2009. She serves on a team whose charge is to prepare GIPS-compliant presentations for 2016. In researching which investment accounts to include in her firm's calculation, she chooses the best performing index funds for the previous seven years.
Does Filner's decisions *most likely* lead to GIPS compliance for her firm's upcoming presentation?

A. No, Filner chose only the best-performing index funds to include in her firm's calculations.

B. No, Filner must include at least 10 years' worth of composite results in order to be GIPS-compliant.

C. Yes, Filner has included data from each year of the firm's activity, including the minimum requirement of five years' data.

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 goal of GIPS is to promote transparency and fair representation of investment performance. Therefore, when preparing a GIPS-compliant presentation, it is crucial to adhere to these principles.

Sandra Filner's decision to only include the best-performing index funds in her firm's calculations does not comply with GIPS. GIPS requires a fair representation of investment results, which means including all actual, fee-paying, discretionary portfolios in the composite. By selectively choosing only the best-performing funds, Filner is not providing a full and fair representation of the firm's investment performance. This cherry-picking of results can lead to an overstatement of performance and does not provide a true picture of the firm's investment capabilities. Therefore, this approach is not in compliance with GIPS.

B is incorrect. While it is true that GIPS requires firms to eventually present a minimum of 10 years of GIPS-compliant performance, this is not required immediately. Firms are required to initially present a minimum of five years of GIPS-compliant performance, or since inception if the firm or the composite has been in existence for less than five years. Thereafter, firms must add one additional year of performance each year, until they reach a minimum of 10 years.

C is incorrect. Although Filner has included data from each year of the firm's activity, she has only selected the best-performing index funds. This selective inclusion of data does not meet the GIPS requirement for a fair representation of investment results. GIPS requires that all actual, fee-paying, discretionary portfolios be included in the composite, not just the best-performing ones.

CFA Level I, Topic 10, Ethics, Learning Module 4: Introduction to the Global Investment Performance Standards (GIPS). LOS (c): Explain the purpose of composites in performance reporting.

Q.88 "To ensure compliance with this Standard, members must understand each client's unique needs. Investment professionals should seek to communicate recommendations to all clients who have indicated an interest and those for whom the securities fit. The Standard does not prohibit a firm from offering various service levels.'' This passage from the CFA Code and Standards *most likely* relates to which of the following?

A. Standard III(C): Suitability.

B. Standard IV(C): Responsibility of Supervisors.

C. Standard V(A): Diligence and Reasonable Basis.

The passage from the CFA Code and Standards most likely relates to Standard III(C): Suitability. This standard emphasizes the importance of understanding each client's unique needs and ensuring that investment recommendations are suitable for the client's financial situation and investment objectives. The passage mentions that investment professionals should communicate recommendations to all clients who have indicated an interest and those for whom the securities fit. This aligns with the principle of suitability, which requires investment professionals to make recommendations that are consistent with the client's financial situation, investment experience, and investment objectives. The passage also states that the Standard does not prohibit a firm from offering various service levels, which is in line with the flexibility allowed under Standard III(C) to cater to the diverse needs of different clients.

B is incorrect. Standard IV(C): Responsibility of Supervisors, requires members to make reasonable efforts to ensure that anyone subject to their supervision or authority complies with applicable laws, rules, regulations, and the Code and Standards. While this standard is important, it does not directly relate to the passage. The passage does not discuss the responsibilities of supervisors or the need to ensure compliance with laws and regulations. Instead, it focuses on understanding client needs and ensuring the suitability of investment recommendations, which is more relevant to Standard III(C).

C is incorrect. Standard V(A): Diligence and Reasonable Basis, requires members to exercise diligence, independence, and thoroughness in analyzing investments, making investment recommendations, and taking investment actions. While this standard is crucial in the investment decision-making process, it does not directly relate to the passage. The passage does not discuss the need for diligence and thoroughness in research or the importance of having a reasonable basis for investment decisions. Instead, it emphasizes the need to understand client needs and ensure the suitability of investment recommendations, which aligns more closely with Standard III(C).

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.89 Nelson Won, CFA, is a tax advisor at a financial services firm. His recent article - on effectively implementing tax minimization strategies for client portfolios with high tax brackets - has increased his popularity in the industry. Won is offered an opportunity to deliver a lecture on tax minimization strategies to employees of an investment management firm in New Zealand. The firm offers to pay for his travel expenses and hotel accommodation. Won accepts the offer, informs his employer, and travels to New Zealand with his fully paid trip. After the lecture, the senior investment manager invites Won to a golf game at an exclusive club. He accepts the offer and informs his supervisor of the invitation upon his return. According to the Standards of Practice Handbook, Won is *most likely*

A. in violation, he should have paid for the New Zealand trip out of his own pocket.

B. in violation, he did not seek written permission prior to accepting the golf game offer.

C. in compliance, details of the golf game were not available to him before departing for New Zealand.

Nelson Won, CFA, was not aware of the golf game invitation before his departure to New Zealand. According to the Standards of Practice Handbook, it is acceptable for Won to disclose the details of the golf game after his return. This is because the information was not available to him prior to his departure. The Standards of Practice Handbook does not require immediate disclosure of such events, especially when the details were not known beforehand. Therefore, Won's actions are in compliance with the Code and Standards. His acceptance of the golf game invitation after his lecture does not constitute a violation as he informed his supervisor upon his return. This shows transparency and adherence to the ethical standards set by the CFA Institute.

A is incorrect. The Standards of Practice Handbook does not prohibit accepting travel expenses and hotel accommodation for official business. In this case, Won was invited to deliver a lecture on tax minimization strategies, which is part of his professional duties. The firm that invited him offered to cover his travel expenses and hotel accommodation, which is a common practice in the industry. Therefore, Won's acceptance of these expenses does not constitute a violation of the Code and Standards. His actions were transparent as he informed his employer about the trip, demonstrating his commitment to uphold the ethical standards of his profession.

B is incorrect. The Standards of Practice Handbook does not require written permission for such activities. Moreover, the details of the golf game were not available to Won before his departure to New Zealand. Upon his return, he informed his supervisor about the golf game, showing his commitment to transparency and adherence to the Code and 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.90 According to the CFA Institute Standards of Professional Conduct concerning disclosure of conflicts, potential conflict situations that could prohibit a member or candidate from fulfilling their duties to the employer should *most appropriately* be dealt with by

A. documenting the conflict.

B. reporting the conflict to the employer.

C. disassociating from the situation.

According to the CFA Institute Standards of Professional Conduct, when a member or candidate encounters a potential conflict situation that could impede their ability to fulfill their duties to their employer, the most appropriate course of action is to report the conflict to the employer. This is because the employer has the right to know about any potential conflicts that could affect the member's or candidate's ability to perform their duties effectively. Reporting the conflict also allows the employer to take necessary steps to manage the conflict, ensuring that the member or candidate can continue to fulfill their duties without any hindrance. This is why option B is the correct answer.

A is incorrect. While documenting the conflict is an important step in managing conflicts, it is not the most appropriate way to deal with potential conflict situations that could prohibit a member or candidate from fulfilling their duties to the employer. Documenting the conflict is a reactive approach and does not actively involve the employer in the resolution process. It also does not guarantee that the conflict will be resolved promptly, which could further impede the member's or candidate's ability to fulfill their duties.

C is incorrect. Disassociating from the situation is not the most appropriate way to deal with potential conflict situations that could prohibit a member or candidate from fulfilling their duties to the employer. While disassociation might seem like a quick fix, it does not address the root cause of the conflict. Moreover, disassociation could potentially lead to the member or candidate neglecting their duties, which is contrary to the CFA Institute Standards of Professional Conduct. Therefore, disassociating from the situation is not the most appropriate way to deal with potential conflict situations.

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.91 The CFA Institute Code of Ethics *most appropriately* requires members and candidates to:

A. encourage others to practice ethically and professionally to reflect credit on the profession.

B. ensure the preservation of capital market integrity is given priority over protecting employer interests.

C. use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities.

The CFA Institute Code of Ethics primarily requires its members and candidates to practice ethically and professionally, and to encourage others to do the same. This is to ensure that their actions reflect positively on themselves and the investment profession as a whole. The Code of Ethics is designed to guide the behavior of its members and candidates, promoting a high level of professionalism and ethical conduct. It emphasizes the importance of maintaining integrity, competence, diligence, respect, and in particular, ethical conduct in all professional activities. Encouraging others to practice ethically and professionally is a key part of this, as it helps to uphold the reputation and credibility of the profession.

B is incorrect. While the preservation of capital market integrity is indeed a crucial aspect of the CFA Institute Code of Ethics, it is not given priority over protecting employer interests. The Code of Ethics requires members and candidates to act in a manner that is ethical and professional at all times, and this includes acting in the best interests of their employers. However, it does not stipulate that the preservation of capital market integrity should be prioritized over employer interests.

C is incorrect. The CFA Institute Code of Ethics does indeed require members and candidates to use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities. However, this is not the primary requirement of the Code. The Code places a greater emphasis on ethical and professional conduct, including encouraging others to practice in the same manner. While independence and objectivity are important, they are part of a broader set of ethical standards and practices that members and candidates are expected to uphold.

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 the seven Standards of Professional Conduct.