

FinQuiz.com

CFA Level I 2nd Mock Exam

June, 2015

Revision 1

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FinQuiz.com – 2nd Mock Exam 2015 (PM Session)

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Questions 1 to 18 relate to Ethical and Professional Standards

1. Laura Elliot is a broker at Housegate, 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 the embezzlement of portfolio funds, which classifies as an illegal activity under domestic trading regulations. In order to comply with the CFA Institute Standards of Professional Conduct, Elliot's preliminary course of action would be to:
 - A. request for a different assignment.
 - B. report the violation to her supervisor.
 - C. report the violation to regulatory authorities.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

Upon learning of the illegal client activity, Elliot's initial course of action should be to stop the behavior by bringing it to the attention of her supervisor or the firm's compliance department. Should this prove unsuccessful, her next course of action would be to disassociate herself from undertaking trades on behalf of the client's account. In the absence of any regulations, members and candidates are not required to report violations to the concerned governmental or regulatory organizations.

2. Standard I (A), Knowledge of the Law, requires members and/or candidates to:
 - A. document a violation when disassociating themselves from an illegal activity.
 - B. have detailed knowledge of all the laws that could potentially govern their activities.
 - C. abide by the rules and regulations related to the administration of the CFA examination.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

Standard I (A), Knowledge of the Law, requires candidates to abide by the rules and regulations related to the administration of the CFA examination. Although members and candidates are required to understand the laws and regulations, which govern their professional activities, they are not required to become experts on or have detailed knowledge of all the laws that could potentially govern their activities.

The standard recommends members and candidates to document a violation when disassociating from an illegal or unethical activity; this is not a requirement.

3. The CFA Institute Code of Ethics requires members and candidates to:
 - A. encourage others to practice in a professional and ethical manner that will 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.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 1, LOS b

Based on the CFA Institute Code of Ethics members and candidates must practice and encourage others to practice in a professional and ethical manner that will reflect credit on themselves and the investment profession. Additionally, members and candidates must promote the integrity of and uphold the rules governing capital markets. The requirement to place the importance of protecting market integrity before employer interest is required by the Standards of Professional Conduct as is the need to achieve and maintain independence and objectivity in professional activities.

4. In order to comply with the CFA Institute Standards of Professional Conduct relating to duties to employers, members and candidates:
- A. should not enter into an independent business while still employed.
 - B. are encouraged to recommend that their employers adopt and distribute a code of ethics.
 - C. may obtain an assurance from a subordinate who has violated the Codes and Standards that the wrongdoing will not recur.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

To comply with the CFA Institute Standards of Professional Conduct relating to duties to employers, members and candidates are encouraged to recommend that their employers adopt and distribute a code of ethics to clients.

The standards do not preclude individuals from entering into an independent business practice, which does conflict with the employer's interest, while still employed as long as prior notification is made.

In a supervisory capacity, when a member or candidate discovers an employee has engaged in an illegal or unethical activity, (s) he should respond promptly by conducting a thorough investigation. Simply obtaining assurances that the illegal activity will not reoccur is not sufficient.

5. Adequate compliance procedures should:
- A. meet regulatory requirements.
 - B. ensure supervisors do not delegate their duties.
 - C. be designed to anticipate every potential violation.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

Adequate compliance procedures should meet regulatory requirements.

The standard concerning responsibility of supervisors permits individuals to delegate their supervisory duties but such delegation does not relieve them of their responsibility.

However, procedures cannot be designed to anticipate every potential violation, which is why such a requirement is not imposed by the Code and Standards.

6. Samantha Town is a portfolio manager at Wallace Associates situated in Dallas, Texas. This year Town has delivered exceptional performance for one of her client's accounts. In exchange for the performance, her client has offered her two front row tickets to an opera as well as the opportunity to meet the stage cast after the show.

To ensure she does not violate the CFA Standards of Professional Conduct, Town's *best* course of action would be to:

- A. reject the offer.
- B. Inform her employer after attending the opera show.
- C. accept the offer after obtaining permission from all relevant parties.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

Standard I (B) Independence and Objectivity permits members and candidates to accept gifts, benefits, compensation from clients as long as the employer is informed either before or after accepting the gift.

Town's best course of action would be to accept the offer as long as she informs her employer. If notification prior to acceptance is not possible, members and candidates must inform their clients about prior acceptance of gifts or benefits.

7. Upon reviewing the materials received during the investigation of a professional conduct inquiry, a designated officer's preliminary course of action would be to:
- A. revoke the member's CFA charter.
 - B. suspend the member's membership.
 - C. propose a sanction which can be rejected by the member.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 1, LOS a

After reviewing the materials obtained during a professional conduct investigation a designated officer will propose a disciplinary sanction, which can be accepted or rejected by the member. If the sanction is rejected, the matter is referred to a hearing panel whose task is to determine whether a violation has occurred and, if so, what sanction should be imposed.

8. Which of the following is a desirable practice of a firm which has a firewall policy implemented for its research and investment banking divisions?
- A. Prohibiting communication between research and investment banking personnel.
 - B. Basing the research analyst's compensation on a flat rate without any contingent bonuses.
 - C. To improve the accuracy of investment analysis, investment banking personnel regularly review research reports prepared by analysts.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

A desirable element of a firewall system is that the compensation arrangement should minimize pressure on research analysts and reward independence and objectivity. Compensation based on a flat fee rate will achieve this purpose.

While some firms go the extreme of prohibiting communication between research and investment banking personnel, this measure may not classify as a desirable element. A more effective solution is control the flow of information across the wall by passing the information through a compliance department.

Providing investment-banking personnel with the authority to review, approve, disapprove, or otherwise make changes to research reports will undermine the independence and objectivity of an analyst and is not a desirable property.

9. Recommended written trade allocation procedures *least likely* include:
- A. processing orders on a first-come, first-served basis.
 - B. allocating trades for new issues by portfolio manager.
 - C. giving all accounts participating in a block trade a weighted price based on their order value.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c

Procedures for allocating trades to clients include:

- processing and executing orders on a first-in, first out basis;
 - allocating trades for new issues by allocating securities by client rather than portfolio manager; and
 - giving all accounts participating in a block trade the same execution price.
10. Joyce Parker is a portfolio manager serving East AM Associates. Parker is calculating the return generated on one of her client's accounts for the current fiscal year. She calculates the net-of-fees return but does not subtract investment management fees rendering the calculated return noncompliant with the GIPS standards. East AM Associates has complied with the GIPS standards since establishment even though local laws do not mandate firms to do so.

Is Parker in violation of the CFA Institute Standards of Professional Conduct?

- A. Yes.
- B. No, she has not violated any law.
- C. No, failure to comply with the GIPS standards does not result in a violation of the Standards of Professional Conduct.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS b

Parker is in violation of Standard III (D) Performance Presentation because she has falsely claimed compliance with the GIPS standards. By misrepresenting performance information,

Parker is in violation of the CFA Institute Standards of Professional Conduct.

11. Ella Lawson is the chief executive at Rome Bank, a commercial banking enterprise. On behalf of the bank Rome will be providing funding to a manufacturing enterprise seeking to expand its operations. During her visit to the manufacturer's factory, Lawson overhears two employees on the production floor discussing the likelihood of their employer's inability to carry out expansion. Lawson holds shares of the enterprise and decides to sell her holding and reject providing financial support.

Lawson is *most likely* in violation of the CFA Institute Standard of Professional Conduct relating to:

- A. loyalty, prudence and care.
- B. diligence and reasonable basis.
- C. material, nonpublic information.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS b

Lawson is in violation of the standard relating to diligence and reasonable basis. This is because the discussion between the two production employees and any information shared is not credible enough to base her investment decision on. Given that these individuals lack seniority, it is less likely they have access to confidential information. Therefore basing her financing and share disposal decisions on information, which is not credible will result in a decision, which lacks a reasonable and adequate basis.

Lawson is not in violation of the standard concerning material nonpublic information. The specificity of the information, the extent of its difference from public information, its nature, and its reliability are key factors in determining whether a particular piece of information is material; the less reliable information is, the less likely it is to be material. As discussed above, the fact that the production employees are discussing a strategic issue whose likelihood of occurrence is uncertain makes the information nonmaterial.

12. Gus Horace is a real estate advisor situated in a developing country. Horace is attempting to sell agricultural land, on behalf of the landowner, to a restaurant chain seeking to grow its own produce. The land lies parallel to a river where industrial waste is frequently dumped. In marketing the land to the potential client Horace states, 'This s a purchase you will not regret. You should more than likely expect to enjoy a healthy crop in your first year of farming.' Horace does not disclose the fact that the original landowner is an acquaintance of his.

Horace is *most likely* in violation of the standard relating to:

- A. fair dealing.
- B. misconduct.
- C. loyalty, prudence and care.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS b

Horace is in violation of the standard relating to misconduct. This is because she has been dishonest regarding the condition of the land being sold. Horace is also in violation of the standard relating to disclosure of conflicts by failing to disclose her relationship with the land's owner. Her independence and objectivity as a real estate advisor may be impaired due to her relationship with the seller.

There is no evidence to indicate that the standard relating to fair dealing has been violated.

13. Martina Gibbons is a CFA Level II Candidate, who is yet to register for the Level III exam. During an interview, Gibbons makes the following two statements:

Statement 1: “I have successfully completed the first two levels of the CFA exam program.”

Statement 2: “The CFA program overstresses areas such as financial analysis which I believe are unnecessary at the Level I stage.”

Which of the following statements *most likely* represents a violation of the standards relating to Responsibilities as a CFA Institute Member or CFA Candidate?

- A. Statement 1 only.
- B. Statement 2 only.
- C. Both of the statements.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS b

Statement 1 represents a violation. Gibbons cannot state that she has a partial designation as a result of passing the second level.

Statement 2 does not represent a violation of the Standards of Professional Conduct. The relevant standard does not cover expressing opinions regarding the CFA Program or CFA Institute.

Members and candidates are free to disagree and express their disagreement with CFA Institute on its policies, procedures or any advocacy position taken by the organization.

14. A firm is eligible for claiming compliance to the GIPS standards if:

- A. the firm, as a whole, fully meets all the requirements.
- B. it undertakes a verification of an investment management firm.
- C. it provides ancillary support to an investment management firm.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 3, LOS a

A firm is eligible for claiming compliance to the GIPS standard only if the entire firm, including its products and composites, meet all the requirements of the standards. Firms cannot claim compliance if they do meet all the requirements or all their products and composites are not in compliance.

15. Verification *least likely* serves to:
- A. provide marketing advantages to a firm.
 - B. ensure the accuracy of a performance presentation.
 - C. test whether disclosure policies are designed to present performance in compliance with the GIPS standards.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 3, LOS c

Verification provides marketing advantages to the firm as the performance presentation of verified firms is more credible.

In addition, verification tests whether a firm's performance policies and procedures are designed to calculate performance in compliance with the GIPS standards; this includes the firm's disclosure policies.

However, verification does not ensure the accuracy of a performance presentation.

16. Which of the following is *least likely* a criterion for including a portfolio in a composite?
- A. Ex-post criteria
 - B. Portfolio existence
 - C. Portfolio manager discretion

Correct Answer: A

*Reference:**CFA Level 1, Volume 1, Study Session 1, Reading 3, LOS b*

The determination of which portfolio should be included in a composite should be done according to pre-established criteria, on an ax-ante basis.

Whether a portfolio should be included in a composite is determined by its existence, whether it actually exists; hypothetical portfolios cannot be included in a composite.

Another criterion that must be considered is the discretion of the composite's portfolio manager; this is because a composite can only include discretionary portfolios in a composite. A manager with no or limited degree of discretion cannot include his or her managed portfolio in a composite.

17. To be able to rely on the integrity of input data, the GIPS standards require firms to:
- A. follow certain calculation methodologies.
 - B. present a minimum of five years of GIPS compliant investment performance.
 - C. include all actual, fee-paying portfolios in at least one composite defined by investment strategy.

Correct Answer: A

*Reference:**CFA Level 1, Volume 1, Study Session 1, Reading 4, LOS a*

To be able to rely on the integrity of input data, the GIPS standards require firms to adhere to certain calculation methodologies and to make specific disclosures along with the firm's performance.

Although including all actual fee-paying portfolios in a composite represents a key feature of the GIPS standards, this requirement will not allow users to rely on the integrity of input data.

The requirement to compile a minimum five-year annual investment performance record does not classify as a key feature of the GIPS standards.

18. Which of the following statements is *most likely* correct regarding compliance with the GIPS standards?
- A. Obtaining verification is not mandatory.
 - B. The GIPS standards are comprehensive addressing unique characteristics of each asset class.
 - C. Compliance with the Code of Ethics and Standards of Professional Conduct is mandatory.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 1, Reading 4, LOS a

Although obtaining verification of its claim of compliance is strongly encouraged, it is not mandatory.

The GIPS standards do not particularly require firms to adhere to the Code of Ethics and/or the Standards of Professional Conduct.

The GIPS standards do not cover unique characteristics of each asset class.

Questions 19 to 32 relate to Quantitative Methods

19. As the degrees of freedom increases, the t-distribution's:
- A. peak becomes flat.
 - B. tails become more fat.
 - C. peak becomes narrow.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 10, LOS i

As the degrees of freedom increase, the peak of the t-distribution approaches standard normal with its peak narrowing and tails becoming less fat.

20. The mean return of the Blue Enterprises' stock is 15.5% while standard deviation is 10.3%. Laura Stone has compiled probability distribution data in an exhibit for the purposes of analysis. She aims to determine the probability that the stock return will neither exceed 20.0% nor decline below the mean return.

Exhibit: Standard Normal Probability Distribution Data

x or z	0	0.03	0.04	0.05
0.30	0.6179	0.6293	0.6331	0.6368
0.40	0.6554	0.6664	0.6700	0.6736
0.50	0.6915	0.7019	0.7054	0.7088

The probability that the stock return will be between the mean return and 20.0% is *closest* to:

- A. 2%.
- B. 17%.
- C. 67%.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 9, LOS m

$P(15.5\% \leq \text{Portfolio return} \leq 20.0\%) = N(Z \text{ corresponding to } 20.0\%) - N(Z \text{ corresponding to } 15.5\%).$

For the first term, $Z = (20.0 - 15.5)/10.3 = 0.4369$ and $N(0.44) = 0.67$. Since 15.5% is the mean, for the normal distribution 50% of the probability lies on either side of the mean. Therefore $N(Z \text{ corresponding to } 15.5\%)$ is equal to 50%. Thus $P(15.5\% \leq \text{Portfolio return} \leq 20.5\%) = 0.67 - 0.50 = 0.17$ or 17%.

21. GR Solutions offers investment plans to its clients. Howard Isaac is one of the firm's clients currently invested in GR's 'Superior Return Plan'. Isaac will require funds to construct a house two years from today. The plan promises to pay \$380,000 in six years from today. Given a 10% discount rate, the amount of funds Isaac should be able to accumulate for the home construction is *closest* to:
- A. \$214,500.
 - B. \$259,545.
 - C. \$314,050.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 3, LOS e

The amount of funds Isaac should be able to accumulate two years from today is equal to the present value of the investment plan's promised payment. The value of the investment two years from today is calculated as follows:

$$FV = \$380,000$$

$$r = 10\%$$

$$N = 4$$

$$\begin{aligned} PV &= FV_N (1 + r)^{-N} \\ &= \$380,000 / (1.10)^4 \\ &= \$259,545.11 \end{aligned}$$

22. The interest rate quoted on an investment can be viewed as:
- A. opportunity costs of future consumption.
 - B. the return forgone from current consumption.
 - C. a sum of the nominal risk-free rate and premiums to compensate for distinct types of risks.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 5, LOS a

The interest rate can be viewed as the opportunity cost of funds; that is, the return forgone from current consumption.

Additionally interest rates are composed of a real risk-free interest rate plus a set of four premiums that are required returns or compensation for bearing distinct types of risk such as inflation, default-risk, liquidity risk or maturity risk.

23. A distribution that is positively skewed is characterized by:
- A. a narrow peak.
 - B. infrequent extreme gains.
 - C. a symmetrical shaped distribution curve.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 7, LOS j

A positively skewed distribution is characterized by frequent small losses and infrequent extreme gains.

A distribution with a narrow peak is called leptokurtic. A distribution that is not symmetrical is skewed.

24. An analyst is calculating the time series mean return for a portfolio allocated 30% to U.S. equities and 70% to U.S. bonds. He has collected annual return data for the years 2000 to 2004.

Exhibit:
Stock and Bond Return Data 2000-2005

	Stocks (%)	Bonds (%)
2000	7.4	10.1
2001	- 5.6	3.4
2002	3.7	- 1.1
2003	9.3	7.9
2004	14.7	12.8

The time series mean return for the portfolio is *closest* to:

- A. 6.4%.
- B. 9.3%.
- C. 10.4%.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 7, LOS e

$$\text{Portfolio return (2000)} = (0.3)(7.4\%) + (0.7)(10.1\%) = 9.29\%$$

$$\text{Portfolio return (2001)} = (0.3)(- 5.6\%) + (0.7)(3.4\%) = 0.70\%$$

$$\text{Portfolio return (2002)} = (0.3)(3.7\%) + (0.7)(- 1.1\%) = 0.34\%$$

$$\text{Portfolio return (2003)} = (0.3)(9.3\%) + (0.7)(7.9\%) = 8.32\%$$

$$\text{Portfolio return (2004)} = (0.3)(14.7\%) + (0.7)(12.8\%) = 13.37\%$$

$$\text{Time series mean return} = (9.29\% + 0.70\% + 0.34\% + 8.32\% + 13.37\%)/5 = 6.40\%$$

25. Sasha Bayle is analyzing the performance of small-cap stocks in an equity index. She is forecasting how stocks will perform relative to the previous quarter in terms of the EPS generated. She performs her analysis using hypothesis testing and rejects the null hypothesis in favor of the forecast that sample stocks will generate a higher EPS. Several months later, Bayle discovers that the null hypothesis was in fact correct and her decision was inaccurate.

Has Bayle committed an error in her statistical analysis?

- A. No.
- B. Yes, a Type I error.
- C. Yes, a Type II error.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 11, LOS c

Bayle has committed a Type I error by incorrectly rejecting the null hypothesis (stocks will not generate an EPS exceeding the previous quarter) in favor of the alternative hypothesis.

26. Construct Inc. will be undertaking a \$30.0 million four-year railroad expansion project in the current year. In order for the project to be successful, the project must generate a profit of at least 10% of the initial cost. If the project fails to do so, the company's budget committee will reduce allocations to managers for future projects (budget squeeze). The railroad expansion project estimates that the project's net present value may run from \$30.5 million on the low end and \$35.0 million on the high end, with the probability of either of the two outcomes being 50% and based on a continuous uniform distribution.

Given the above data, the probability of a budget squeeze is *closest* to:

- A. 50.0%.
- B. 55.6%.
- C. 83.3%.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 9, LOS i

All \$ figures are in millions.

Project profitability can take on a value of \$0.5 (\$30.5 – \$30.0) on the low end and \$5 (\$35.0 – \$30.0) on the high end.

Range of possible values = \$5.0 – \$0.5 = \$4.5

Fraction of possible values falling below \$3 ($\30×0.1) and resulting in budget squeeze is the distance between 3 and 0.5 or 2.5; this value is 0.5556 ($2.5/4.5$) of the total length of 4.5.

Therefore, the probability of a budget squeeze is 55.6%.

27. A strategy that provides a statistically significant positive mean return often:
- A. is economically meaningful.
 - B. factors risk in the decision making process.
 - C. does not account for transaction costs and taxes.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 11, LOS e

A strategy providing a statistically significant positive mean return is not necessarily economically meaningful after transaction costs, taxes and risk are considered.

28. An economic analyst has forecasted that inflation is projected to rise in the twenty developing countries being sampled. The average inflation observed in these countries in the previous year was 0.0258 while the variance of the average inflation of the sample countries is 0.013. The analyst will use a reliability factor of 2.845 for the analysis.

Based on a normal distribution and an unknown population variance, the 90% confidence interval for the population mean of forecasted inflation is *closest* to:

- A. 0.02609 ± 0.02551 .
- B. 0.03407 ± 0.01753 .
- C. 0.03060 ± 0.02100 .

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 10, LOS j

Since the analyst is sampling from a population with an unknown variance and using a small sample size (< 30), the t-distribution is used to calculate the confidence interval:

$$\bar{X} \pm t_{\alpha/2} \frac{s}{\sqrt{n}} = 0.0258 \pm 2.845 * \frac{0.013}{\sqrt{20}} = 0.034070 \pm 0.017530$$

29. A multivariate distribution species probabilities for:
- A. two or more related variables.
 - B. uniformly distributed variables.
 - C. variables with the same mean and different standard deviations.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 9, LOS k

A multivariate distribution specifies the probabilities for a group of related random variables that are normally distributed.

A standard normal distribution includes two normal distributions with the same mean but different standard deviations.

- 30 The amount of the annual dividend paid by ART Enterprises to its shareholders depends on the profits available for distribution. There is 30% probability that the company will generate profits less than \$50,000 and pay a dividend per share of \$3 with probability of 15%. There is 70% probability that profits will exceed \$50,000 and the company will pay a dividend per share of \$6 with probability of 45%.

The expected dividend payment given ART Enterprises generates profits of less than \$50,000 is *closest* to:

- A. \$0.135.
- B. \$0.450.
- C. \$3.000.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 8, LOS i

Expected dividend per share if less than \$50,000 are generated = $0.15 \times \$3.00 = \0.45

31. Increasing the sample size:
- A. widens the confidence interval.
 - B. decreases the sample standard error.
 - C. lowers the precision with which the population parameter is estimated.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 10, LOS k

The sample standard error (or deviation) is inversely related to the sample size. A larger sample size decreases the sample standard deviation and consequently the width of the confidence interval. The larger the sample size, the greater the precision with which one can estimate the population parameter.

32. Lance Thackery is an equity analyst at Eve Scott Associates. Thackery is following the stock of a pharmaceutical. She is attempting to analyze whether the upcoming launch of a Type-I diabetic drug will be successful and increase the market price of the pharmaceutical's share. The probability that the stock price will increase given a successful drug launch, $P(A/S)$, is 0.35. Thackery has summarized important forecast probabilities in the exhibit below:

Exhibit: Forecast Probabilities

	Probability
Probability stock price increases	0.40
Probability stock price is unchanged	0.60
Probability drug launch is successful	0.45
Probability drug launch is unsuccessful	0.55

The probability that the stock price increases given that the drug launch is unsuccessful is *closest* to:

- A. 0.44.
- B. 0.52.
- C. 0.65.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 8, LOS e

$P(A)$ = Probability stock price increases

$P(S)$ = Probability drug launch is successful

The probability, $P(A/S^C)$, needs to be calculated.

$$P(A) = P(A/S)P(S) + P(A/S^C)P(S^C)$$

$$0.40 = 0.35(0.45) + P(A/S^C)(0.55)$$

$$P(A/S^C) = 0.44$$

Questions 33 to 44 relate to Economics

33. The difference between partial and general equilibrium analysis is that at least one of the analysis:
- A. ignores exogenous variables.
 - B. ignores endogenous variables.
 - C. does not take feedback effects from all markets into consideration.

Correct Answer: C

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 13, LOS e

Both partial and general equilibrium analysis take endogenous and exogenous variables into consideration. However, the difference between the two is that the former concentrates on one market and does not address the feedback effects from all other markets.

34. In a developing country, the real GDP growth rates for 2010 and 2012 were 2% and 4% respectively. Over the same period, nominal GDP growth rates were 3% and 5% respectively.
In the time period under analysis, the growth in the economy in real terms was *closest* to:
- A. 29.1%.
 - B. 41.4%.
 - C. 100.0%.

Correct Answer: B

Reference:

CFA Level 1, Volume 2, Study Session 5, Reading 17, LOS c

Real growth in an economy is measured by the percentage change in real GDP. Between 2010 and 2012 this growth is $(4\%/2\%)^{0.5} - 1 = 1.41\%$ or 41.4%.

35. Based on an analysis of a country's statistics, an economic analyst observes that economic expansion caused by an increase in aggregate demand has resulted in an inflationary gap. Based on the economic situation the *most* appropriate investment strategy would be to increase investments in:
- A. cyclical companies.
 - B. defensive companies.
 - C. fixed-income securities.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 5, Reading 17, LOS i

When the economy is in a state of expansion caused by an increase in AD, suitable investment strategies include:

- increasing investment in cyclical companies because they are expected to experience the largest increase in earnings.
 - reducing investment in defensive companies because they are expected to have only a modest increase in earnings.
 - reducing investments in fixed-income securities because they will decline in price as a result of an increase in interest rates.
36. Ni-tech is an electric component manufacturer. The exhibit below illustrates sales revenue, number of components sold, and GDP data for the years 2012 and 2013.

	2013	2012
GDP (\$ millions)	45.85	38.63
Quantity sold	85,600	85,000
Average sales revenue (\$ millions)	2.14	1.53

Based on the data provided, the GDP deflator is *closest* to:

- A. 118.69.
- B. 138.89.
- C. 139.87.

Correct Answer: B

Reference:

CFA Level 1, Volume 2, Study Session 5, Reading 17, LOS c

$$\begin{aligned}\text{GDP deflator} &= \frac{\text{Value of current year output at current year prices}}{\text{Value of current year output at base prices}} \times 100 \\ &= \frac{2,140,000}{\left[85,600 \times \left(\frac{\$1,530,000}{85,000}\right)\right]} \times 100 = 138.89\end{aligned}$$

37. In a perfectly competitive market, the slope of an individual firm's demand curve is *most likely*:

- A. flat.
- B. kinked.
- C. positive.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 16, LOS b

Under a perfectly competitive market, the slope of an individual firm's demand curve is flat.

38. Martha Yates is an economic analyst studying the trading activities between Sri Lanka and the United States with the former exporting tea to the latter and importing cars. The output per worker per day is summarized in the exhibit below:

Exhibit: Output per Worker per Day

	Cars	Tea (grams)
United States	2	100
Sri Lanka	1	350

Sri Lanka *most likely* has a (n):

- A. absolute advantage in the production of cars.
- B. comparative advantage in the production of tea.
- C. comparative advantage in the production of cars.

Correct Answer: B*Reference:**CFA Level 1, Volume 2, Study Session 6, Reading 20, LOS c*

The U.S. has an absolute advantage in the production of cars because it produces more cars per worker per day than Sri Lanka.

The opportunity cost of a car in the U.S. is 50 grams of tea ($100/2$ or $1 \text{ car} = 50$ grams of tea). In Sri Lanka, the opportunity cost of a car is 350 grams of tea. Thus the U.S. has a comparative advantage in producing cars. In contrast, the opportunity cost of a gram of tea in the U.S. and Sri Lanka is $1/50$ and $1/350$ per car, respectively. With a lower opportunity cost per gram of tea, Sri Lanka has a comparative advantage in this respect.

39. The following transactions were recorded in a country's balance of payments account for the year 2013:
- The total profit generated from outsourcing garment manufacturing to overseas factories amounted to \$1.4 billion.
 - The country's engineering universities received a total grant of \$40 million from overseas donors.
 - The total amount of equity securities issued amounted to \$1.2 billion.
 - Dividend income generated by citizens amounted to \$0.3 billion.
 - Foreign fixed income holdings transferred to the country's domestic financial institutions by migrants totaled \$15 million.
 - The tourism and travel industry generated revenues of \$0.2 billion.

The country's capital account balance amounts to (in \$ billions):

- A. 0.015.
- B. 1.215.
- C. 1.555.

Correct Answer: A*Reference:**CFA Level 1, Volume 2, Study Session 6, Reading 20, LOS g*

- Out of the transactions listed, only one will be a component of the capital account, fixed income securities brought into the country by migrants.
40. Sasha Gibbons is an economic analyst who is evaluating the impact of changes in four factors on Nepal's economic growth. Gibbons has collected her observations in the exhibit below:

Exhibit: Observations Concerning Factors

Factor	Observation
1	The global price of oil has increased due to higher demand from industrialized economies.
2	The relative value of the Nepalese rupee relative to the dollar (USD/NPR) has increased in the current year due to a surge in foreign investments.
3	The Nepalese authorities have implemented a regulation mandating enterprises to undertake production worker training.

Considering each of the factors in isolation, which of the following statements accurately addresses the impact of the observation on the short-run and long-run aggregate supply curves?

- A. Factor 3 will shift the LRAS and SRAS curves rightward.
- B. Factor 2 will not impact the SRAS curve but will shift the LRAS curve rightward.
- C. Factor 1 will shift the SRAS curve leftward but have no impact on the LRAS curve.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 5, Reading 17, LOS i

Factor 1 will result in a leftward shift in the short-run aggregate supply (SRAS) curve and have no impact on the long-run aggregate supply (LRAS) curve. SRAS will shift leftward due to an increase in the cost of production.

Factor 2 will shift the SRAS curve rightward as an increase in exchange rate lowers the cost of production. The LRAS curve will not be impacted.

Factor 3 will shift the SRAS and LRAS curves rightward. An increased level of worker training will increase human capital and improve the quality of labor force. Thus the SRAS and LRAS curves should shift to the right.

41. Mark Sinatra is a U.S. equity investor with a global investment portfolio. Sinatra's portfolio currently comprises of North and European equities. He would like to expand his portfolio and allocate \$0.5 million to Japanese equities. Information concerning current and expected one-month spot rates is summarized in an exhibit.

Exhibit:
Current and Expected One-Month Spot Rates

	Spot Rate	Expected Spot Rate in One-Month
USD/EUR	1.3805	1.3759
JPY/EUR	0.0071	0.0089

The expected change in the USD/JPY rate in one month's time is *closest* to:

- A. – 20.49%.
- B. – 0.33%.
- C. + 25.35%.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 6, Reading 21, LOS d

The current USD/JPY spot rate is 194.4366 ($1.3805/0.0071$) while the expected one-month spot rate is 154.5955 ($1.3759/0.0089$).

Expected change in the USD/JPY rate = $(154.5955/194.4366) - 1 = -20.49\%$

42. If the amount of money that can be created from an additional deposit of \$200 in a deposit account is \$2,500, the money multiplier is *closest* to:
- A. 8.0.
 - B. 11.5.
 - C. 12.5.

Correct Answer: C

Reference:

CFA Level 1, Volume 2, Study Session 5, Reading 19, LOS c

Reserve requirement = New deposit/ Amount of additional money created by a deposit

$$= \$200/\$2,500 = 0.08$$

$$\text{Money multiplier} = 1/0.08 = 12.5$$

43. Industrial equipment will be typically sold in a (n):
- A. factor market.
 - B. goods market.
 - C. capital market.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 13, LOS a

Factor markets are markets for the purchase and sale of factors of production. Industrial equipment will be typically sold in a factor market.

44. A market has reached its equilibrium quantity if the:
- A. lowest price buyers are willing to accept is equal to the highest price sellers are willing to offer.
 - B. lowest price sellers are willing to offer and the highest price buyers are willing to accept are equal.
 - C. highest price buyers are willing to accept is higher than the lowest price sellers are willing to offer.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 13, Page 9, LOS b

A market is in equilibrium if the lowest price a selling is willing to offer is equal to the highest price a buyer is willing to accept.

Questions 45 to 68 relate to Financial Reporting and Analysis

45. Rigid Corp purchased machinery for €45,000 at the beginning of the fiscal year ending June 30, 2011. At the end of the year, the fair value of the machinery was €48,000. Rigid Corp has elected to use the revaluation model.

Rigid will record a gain of €3,000 in its income statement if it complies with:

- A. IFRS.
- B. U.S. GAAP.
- C. neither IFRS nor U.S. GAAP.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS g

IFRS permit companies to use either the cost or revaluation model for the periodic valuation and reporting of long-lived tangible assets. If revaluation initially increases the value of the asset, the gain will bypass the income statement and be recorded directly in equity as part of revaluation surplus.

U.S. GAAP do not permit the use of the revaluation model. Therefore, any increase in the asset's value will be ignored.

46. A book publisher shipped 40,000 books to its customers during the month of January. The average price of each book sold was \$45 while total cost per book was \$30. Invoice payments are due in 45 days and no cash changes hands at the point of sale.

Which of the following statements accurately reflects the accounting consequences of the sales transaction?

- A. Net assets will increase by \$600,000.
- B. Liabilities will increase by \$1,800,000.
- C. Gross profit will decrease by \$1,200,000.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 23, LOS c

Accounts receivable will increase by \$1,800,000 ($40,000 \times \45) while inventory will decrease by \$1,200,000 ($\$30 \times 40,000$) and revenue will increase by \$1,800,000. Cost of goods sold will increase by \$1,200,000.

Thus, net assets (total assets – total liabilities) will increase by \$600,000 ($\$1,800,000 - \$1,200,000$). Gross profit will increase by \$600,000.

47. The role of financial reporting is *most likely* to:
- A. provide requisite information to assist analysts in their decision making.
 - B. evaluate the past, current and potential performance and financial position of a company.
 - C. provide information on a company's financial position, changes in financial position and performance.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 22, LOS a

The role of financial reporting is to provide information about a company's performance, financial position and changes in financial position that is useful to a wide range of users in making economic decisions.

The role of financial statement analysis is to use financial reports prepared by companies, combined with other information, to evaluate the past, current, and potential performance and financial position of a company for the purpose of making investment, credit and other economic decisions.

48. Sources of information which analysts may use besides annual financial statements and supplementary information *most likely* include:
- A. footnotes.
 - B. proxy statements.
 - C. statement of other comprehensive income.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 22, LOS c

Both footnotes and management commentary are considered supplemental to financial reports. Proxy statements, which are statements distributed to shareholders prior to company meetings containing matters that are put to vote, are considered sources of information besides annual financial statements and supplementary information.

The statement of other comprehensive income is included in a company's annual financial statements.

49. The market value of one of Thomas Associate's investments increased by \$4,500 and generated interest income of \$300. The security is classified as held for trading.

The change in the company's revenues attributable to the investment is *closest* to:

- A. \$300.
- B. \$4,500.
- C. \$4,800.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 23, LOS c

Interest income will increase the company's revenue by \$300 and the increase in the market value of the investment represents unrealized gains, further increasing the company's revenues. Thus revenue will increase by a total of \$4,800.

50. A parcel of land with an original cost of \$0.9 million was sold for \$1.2 million. The seller received \$0.4 million as down payment with the remainder to be recovered over a period of eight years. The seller is uncertain about the buyer's ability to make the remaining payments.

Using the installment method, the profit recognized by the seller that is attributable to the down payment is *closest* to:

- A. \$0.00 million.
- B. \$0.10 million.
- C. \$0.40 million.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS b

Under the installment method, the portion of the total profit of the sale that is recognized in each period is determined by the percentage of the total sales price for which the seller has received cash.

By apportioning the cash received between cost recovered and profit, the ratio of profit to sales value is 25.0% $[(\$1.2 \text{ million} - \$0.9 \text{ million})/\$1.2 \text{ million}]$.

Profit attributable to the down payment = $25.0\% \times \$0.4 \text{ million} = \0.10 million

51. The cash generated by a bank as a result of taking deposits will *most likely* be classified as a (n):
- A. investing cash flow.
 - B. financing cash flow.
 - C. operating cash flow.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 23, LOS a

Operating activities are part of the day-to-day business functioning of an entity. A bank primarily takes deposits and extends loans to customers and any resulting cash generated or expended from these activities will be classified as operating in nature.

52. On February 15, 2013 Elite Corp purchased 50,000 inventory units at a price of \$20 per unit. Elite subsequently purchased 30,000 units in September at a unit price of \$22 and 40,000 units in November at \$25. The number of units sold in that year was equal to 75,000. Elite uses the LIFO method of inventory accounting.

Elite's closing inventory balance on December 31, 2013 is *closest* to:

- A. \$900,000.
- B. \$1,000,000.
- C. \$1,110,000.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS d

Using the LIFO method of inventory accounting, items purchased last are sold first. Closing inventory comprises (older) earlier purchases.

Under the LIFO method it is assumed that the 40,000 units of inventory purchased in November are the first to be sold followed by the 30,000 units in September. The remaining 5,000 units ($75,000 - 40,000 - 30,000$) are assumed to be sold from the February purchase of 50,000 units.

Therefore, closing inventory comprises 45,000 units at a price of \$20 per unit or a total value of \$900,000.

53. A security is antidilutive if it:
- A. equates the basic EPS to the diluted EPS.
 - B. decreases the basic EPS relative to the diluted EPS.
 - C. Improves the wealth of a company's shareholders.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS h

A security is antidilutive if its inclusion in the computation of the (diluted) EPS will produce a measure higher than the basic EPS.

54. Oscar Richards is a market analyst serving an economic research firm. He is attempting to measure the value a small-cap equity stock and has decided to employ the stock's purchase price. He believes the fair value measure is inappropriate due to its lack of objectivity and need for judgment.

Which of the following financial reporting barriers is *most likely* highlighted by Richards' decision to employ historical cost?

- A. Valuation
- B. Consistency
- C. Measurement

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 24, LOS c

Valuation can be a barrier to effective financial reporting. This is because, out of the measures of value that exist, historical cost is the most objective and the least relevant. On the other hand, fair value is more relevant but is less objective and requires more judgment.

55. Ilkot Inc. is a manufacturer of skiing equipment that has purchased an automated paint coating unit for \$600,000. The unit has an estimated useful life of eight years and a residual value of \$10,000.

Using the double declining balance method, the unit's net book value in the second year of its useful life is *closest* to:

- A. \$184,375.
- B. \$187,500.
- C. \$337,500.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS d

$$\text{Straight-line rate} = 1/8 \times 100 = 12.5\%$$

$$\text{Diminishing balance rate} = 12.5\% \times 2 = 25.0\%$$

$$\text{Net book value (Year 1)} = \$600,000 \times (1 - 0.25) = \$450,000$$

$$\text{Net book value (Year 2)} = \$450,000 - [(\$450,000 \times 0.25) + (\$600,000 \times 0.25)] = \$187,500$$

56. In 2008 THC Manufacturers started business by purchasing 35,000 units at a unit price of \$55 and sold 23,000 units at a unit price of \$60. In 2009 the company purchased 5,500 units at a price of \$58 and sold 13,500 at a price of \$75. THS Manufacturers complies with U.S. GAAP and applies the FIFO method of inventory accounting.

In 2009 THS will report an ending inventory balance of:

- A. \$87,000.
- B. \$220,000.
- C. \$232,000.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 29, LOS c

Using the FIFO method of inventory accounting, the units purchased first are assumed to be sold first and ending inventory comprises newer purchases.

$$\text{Total units sold} = 13,500 + 23,000 = 36,500$$

The first 35,000 units are assumed to be completely sold, leaving 4,000 $[5,500 - (36,500 - 35,000)]$ of the units purchased in 2009 in ending inventory.

$$\text{Ending inventory balance} = 4,000 \times \$58 = \$232,000$$

57. In 2009 a portion of LRV Corp.'s inventory had a carrying value of \$0.7 million. The inventory was originally purchased at a total cost of \$1.1 million. The cost to replace these units has been estimated at \$0.8 million. The net realizable value is \$0.9 million and should the company decide to sell the inventory it should earn an estimated dollar profit margin of \$4,250. LRV prepares and presents its financial statements in accordance with U.S. GAAP.

In its 2011 balance sheet, LRV's inventory will be reported at a value *closest* to:

- A. \$700,000.
- B. \$895,750.
- C. \$900,000.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 29, LOS f

Under U.S. GAAP, inventory is measured at the lower of cost or market (replacement costs) with the latter being subject to upper and lower limits.

Upper limit = Net realizable value

Lower limit = Net realizable value – normal profit margin

Upper limit = \$900,000

Lower limit = \$900,000 – \$4,250 = \$895,750

Given that market value is lower than cost (\$0.8 million versus \$1.1 million respectively), inventory is impaired. Given that inventory value cannot decline below the lower limit, LRV will write down its inventory to \$895,750.

58. Intangible assets with perpetual lives are *most likely*:
- A. depreciated.
 - B. amortized but not tested for impairment.
 - C. tested annually for impairment but not amortized.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS d

Intangible assets with indefinite lives are neither amortized nor depreciated but are tested at least annually for impairment.

59. In 2009, Aero Inc began commercial production by purchasing 100,000 units of inventory at a unit price of \$55. In the same year Aero sold 80,000 units at a price of \$70. The following year the company purchased 65,000 units at a unit price of \$60 and sold 60,000 units at a unit price of \$75. Aero applies the weighted average method of inventory accounting.

The cost of sales reported in 2010 is *closest* to:

- A. \$2.6 million.
- B. \$3.5 million.
- C. \$4.2 million.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 29, LOS c

Weighted average cost of inventory in 2010 = $[(20,000 \times \$55) + (65,000 \times \$60)] / (20,000 + 65,000)$

$$= 5,000,000 / 85,000$$

$$= \$58.82$$

Cost of sales = $60,000 \times \$58.82 = \$3,529,412$ or \$3.5 million

60. If inventory unit costs are rising and inventory quantities are constant, which inventory accounting method will result in the highest reported taxable income?
- A. LIFO
 - B. FIFO
 - C. Weighted average cost

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 29, LOS e

When inventory unit costs are rising and inventory quantities are constant or increasing, the FIFO method of inventory accounting will generate the highest taxable income. This is because cost of sales will reflect older, cheaper inventory units resulting in higher gross profit, operating profit and taxable income.

61. On March 1, 2010 Tecnox, a chip processor, purchased a manufacturing unit to be used in its production process. Depreciation charges are applied in full in the year of purchase. Details relevant to the unit purchased are summarized in the exhibit below:

Exhibit: Manufacturing Unit Details

Original cost	\$680,000
Residual value	\$200,000
Estimated useful life	5 years
Total estimated productive capacity	1,000 chips
Production in each year (number of chips)	2010: 280 2011: 450 2012: 120 2013: 100 2014: 50
Applicable depreciation method	Units-of-production

The accumulated depreciation expense in 2011 is *closest* to:

- A. \$65.6 million.
- B. \$70.1 million.
- C. \$99.3 million.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS d

$$\text{Cost per unit} = (\$680,000 - \$200,000)/5 = \$96,000$$

$$\text{Depreciation expense in 2010} = \$96,000 \times 280 = \$26,880,000$$

$$\text{Depreciation expense in 2011} = \$96,000 \times 450 = \$43,200,000$$

$$\text{Accumulated depreciation expense (2011)} = \$26,880,000 + \$43,200,000 = \$70,080,000 \text{ or approximately } \$70.1 \text{ million.}$$

62. Which of the following associated costs will *least likely* be capitalized as part of an automated paint mixing unit?
- A. Training staff on how to maintain the unit.
 - B. Installation and testing of the machine's operations.
 - C. Replacing the factory's lighting system to allow for the unit to operate.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS a

Installation and testing of the machine's operations are necessary to get the asset ready for its intended use and are capitalized. In addition replacing the lighting system is a means of preparing the asset for its intended use and is capitalized accordingly. However, training staff on how to maintain the unit is not needed to get the asset ready for its intended use and is thus expensed.

63. On March 1, 2013 a customer subscribed to a monthly newsletter paying an annual fee of \$1,440 on that day. The news agency's financial year ends on December 31, 2013.

The adjustment required to the company's liabilities with respect to the specific transaction at year-end is *closest* to:

- A. \$0.
- B. \$240.
- C. \$1,200.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 7, Reading 23, LOS d

On March 1 the company will record unearned revenues (liability) of \$1,440. On December 31 revenue relating to ten issues has been realized and two remain. Therefore, the unearned revenue account will be reduced by \$1,200 ($\$1,440/12 \times 10$) and transferred to revenue to reflect realized earnings.

64. A book publishing firm gained the right to use a patent as a result of acquiring a competitor.

How will the patent be accounted for by the firm? The patent will be:

- A. accounted for using the cost model.
- B. recognized if it meets certain pre-specified criteria.
- C. allocated a share of the acquisition price on the basis of the asset's fair value.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS b

Intangible assets acquired in a business combination are allocated a portion of the acquisition cost (purchase price) on the basis of their fair value.

65. Utah Corp is a designer of home lighting systems and accessories. In 2012, Utah expanded its production by converting a vacant property into a factory; the property was being held by the company as investment property. Prior to the conversion, the property's fair value was €150,000. The original purchase price of the property was €120,000. Utah prepares and presents its financial statements in accordance with IFRS.

In response to the change in classification, Utah will:

- A. make no accounting adjustments.
- B. record a gain of €30,000 in its income statement.
- C. revalue the value of the property upwards by \$30,000 in its balance sheet.

Correct Answer: A

*Reference:**CFA Level 1, Volume 3, Study Session 7, Reading 30, LOS k*

When a company changes the use of the property from being an investment property to owner-occupied property and the chosen model is the fair value model, the property's fair value is considered to be its cost for accounting purposes and no further accounting adjustments are necessary. Furthermore, neither a gain nor loss arises on the transfer.

66. Sash Imperial has undertaken a contract to build a railroad line. The project will take three years to complete and Sash is expected to receive \$40.00 million on completion. Total project costs are estimated at \$31 million. At the end of the first year Sash has spent \$12.00 million and expects to incur a total loss of \$0.50 million over the remaining project term. Sash complies with U.S. GAAP.

The amount recognized by Sash in its income statement at the end of Year 1, in relation to the project, is *closest* to:

- A. \$2.98 million.
- B. \$3.48 million.
- C. \$15.48 million.

Correct Answer: A

*Reference:**CFA Level 1, Volume 3, Study Session 8, Reading 25, LOS b*

Under U.S. GAAP the percentage of completion method is used to recognize the revenues for long-term construction projects when the outcome of the project is reliable.

Expected losses are to be recognized immediately.

All \$ amounts are in millions.

Revenue recognized for Year 1 amounts to \$15.48 ($\$12/\$31 \times \40). Given that \$12 expenses have been incurred and a loss of \$0.50 is anticipated, the net amount recognized in relation to the contract is \$2.98 ($\$15.48 - \$12.00 - \0.50).

67. Which of the following properties will *most likely* fit the definition of investment property according to IFRS?
- A. An office building used solely for administrative purposes.
 - B. Company housing units provided to employees free of cost.
 - C. A vacant factory plant that is leased to a manufacturing firm.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 29, LOS k

Investment property is owned for the purposes of earning rentals or capital appreciation or both. A vacant factory plant leased to a manufacturing firm classifies as investment property since the purpose is to earn rentals.

Neither the office building used for administrative purposes nor company housing units provided to employees classify as investment property.

68. U.S. GAAP requires software development costs to be:
- A. expensed as incurred.
 - B. expensed if they relate to software to be developed for internal use.
 - C. capitalized once the saleable product's technological feasibility has been established.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS b

U.S. GAAP requires software development costs incurred to develop a product for sale to be expensed as incurred and capitalized once technological feasibility has been established. Similarly costs to develop software for internal use will be capitalized once it is probable that the project will be completed and that the software will be used as intended.

Questions 69 to 76 relate to Corporate Finance

69. Rector Incorporated is a manufacturing firm with a capital structure comprising of equity and debt. The current market value of equity is \$2.0 million and the beta of the stock is 1.2. The company has \$4 million face value of bonds outstanding, which pay semi-annual coupons at an annual rate of 8%. The yield-to-maturity is 9% and the remaining term to maturity is 5 years.

The corporate pays tax at a rate of 25%. The equity risk premium and risk-free rate is 4% and 2%, respectively.

Rector Incorporated's weighted average cost of capital (WACC) is *closest* to:

- A. 4.55%.
- B. 6.77%.
- C. 7.59%.

Correct Answer: B

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 36, LOS c

$$\begin{aligned} \text{WACC} &= (0.3424)[2\% + 1.2(4\%)] + (0.6576)(9\%)(1 - 0.25) \\ &= 6.77\% \end{aligned}$$

Present value of debt:

$$N = 10$$

$$I/Y = 4.5\% \text{ (9\%/2)}$$

$$FV = 4,000,000$$

$$PMT = 160,000$$

$$\text{CPT Present value: } 3,841,746$$

$$\begin{aligned} \text{Weight of debt in capital structure} &= \$3,841,746 / (\$3,841,746 + 2,000,000) = \\ &65.76\% \end{aligned}$$

$$\begin{aligned} \text{Weight of equity in capital structure} &= \$2,000,000 / (\$3,841,746 + 2,000,000) = \\ &34.24\% \end{aligned}$$

70. Which of the following statements *most* accurately compares the NPV and payback period methods?
- A. The payback period and NPV will always yield identical project rankings.
 - B. Compared to the payback period, NPV is a better measure of project liquidity.
 - C. The payback period may lead to the acceptance of a project with a negative NPV.

Correct Answer: C

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 35, LOS d

In the case of projects with a payback of one year and small amount of positive cash flows thereafter, the NPV may be negative. Based on the payback period, the project is worthwhile. However, based on profitability (NPV), the project is not worthwhile. Thus, NPV and payback period may generate conflicting rankings.

The payback period is a measure of project liquidity while NPV is a measure of investment profitability.

71. Snat Limited is an ink manufacturing firm. The executives of the firm have recently undertaken a project with a profitability index (PI) of 1.50. The company made an investment worth \$300,000 at the start of the project.

The slope of the NPV profile of the project is best described as:

- A. convex.
- B. concave.
- C. horizontal.

Correct Answer: A

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 35, LOS e

The slope of the NPV profile is convex from the origin. That is the NPV declines at a decreasing rate as the discount rate increases.

72. Michael Poole is an equity analyst at Dave Associates, a financial services firm. Poole is estimating the firm's cost of equity using the dividend discount model approach. He has learnt that the Gordon's growth model is particularly useful in deriving the required rate of return when this approach is used. The company has paid a dividend of \$2.5 per share in the previous year.

The current market price per share is \$25. The company's retention rate and return on equity is 40% and 10%, respectively.

The cost of equity using the dividend discount model is *closest* to:

- A. 14.00%.
- B. 14.40%.
- C. 16.40%.

Correct Answer: B

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 36, LOS h

Based on the Gordon's growth model, return on equity is calculated as:

$$r_e = \frac{D_1}{P_0} + g$$

where $g = (1 - D/EPS)ROE$

$$g = (0.4)(0.1) = 0.04 \text{ or } 4\%$$

Based on the return on equity, the intrinsic value of a stock can be calculated.

$$\begin{aligned} r_e &= [(\$2.5 \times 1.04)/\$25] + (0.4)(0.10) \\ &= 14.40\% \end{aligned}$$

73. Dwight Engle is a financial analyst evaluating the risks associated with two detergent manufacturers, Home Care and CleanWay. Home Care has a higher per-unit variable operating cost while CleanWay's fixed operating costs are 1.5 times greater. Out of the two corporations being analyzed, Home Care has a greater total number of shares outstanding and finances a greater proportion of its projects using equity. CleanWay, on the other hand, rarely uses equity as a financing source.

Based on his findings, Engle will *most likely* conclude that:

- A. CleanWay has more operating risk.
- B. Home Care's net income is more sensitive to changes in operating income.
- C. Home Care's cash flows have greater sensitivity to changes in operating income.

Correct Answer: A

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 37, LOS a, b & c

CleanWay has greater operating risk as evident from its ratio of fixed operating costs to variable operating costs.

Since CleanWay employs a higher degree of financial leverage, its net income is more sensitive to changes in operating income.

Clean Way's cash flows have greater sensitivity to changes in operating income; this is because a majority of its projects are financed using debt.

74. Aero and Beta are commercial aircraft manufacturers. Kayla Mason is an industry analyst evaluating the financial and operating leverage structures of the two competitors. She has collected sales and cost data concerning the manufacturers in an exhibit. She expects unit sales to increase by 5% from their 2012 level.

Exhibit: Sales and Cost Data Concerning Aero and Beta

	Aero	Beta
Sales price per unit (\$)	50	40
Variable costs per unit (\$)	35	30
Total fixed costs (\$)	350,000	250,000
Units produced and sold (2012)	50,000	50,000

Based on the expectations for 2013, Mason will *most likely* conclude that the change in operating income will *most likely* be:

- A. greater for Aero.
- B. greater for Beta.
- C. the same for both companies.

Correct Answer: B

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 37, LOS b

To determine the pace of growth in operating income, it is necessary to determine the degree of operating leverage (DOL) for the two manufacturers.

$$\text{DOL} = \frac{Q(P - V)}{Q(P - V) - F}$$

$$\text{DOL (Aero)} = \frac{50,000(\$50 - \$35)}{50,000(\$50 - \$35) - 350,000} = 1.875$$

$$\text{DOL (Beta)} = \frac{50,000(\$40 - \$30)}{50,000(\$40 - \$30) - 250,000} = 2.00$$

An increase in units produced by 5% will increase Aero's operating income by 9.375% ($1.875 \times 5\%$) and Beta's by 10% ($2 \times 5\%$). Therefore, Beta's operating income will change at a greater rate.

75. A shareholder owns 20% of a company with a market value of \$30 million. The total shares outstanding of the corporation are 5,000,000 with a market price per share of \$30. The current earnings per share is \$2.50. This year the company issued a 5% stock dividend to the shareholder.

How will the stock dividend impact earnings per share (EPS)?

- A. EPS will not be affected.
- B. EPS will decline by 4.80%.
- C. EPS will increase by 5.00%.

Correct Answer: B

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 38, LOS a

Shares outstanding (after stock dividend) = 5,250,000 ($5,000,000 \times 1.05$)

EPS (after stock dividend) = \$2.38 [$(\$2.50 \times 5,000,000) / 5,250,000$]

EPS will decline by 4.80% ($2.38 / 2.50 - 1$).

*The distribution of a stock dividend should not affect the earnings power of a corporation.

76. ABC Inc. has announced the buyback of a portion of its 5,000,000 shares outstanding. The current market price, \$30, is 10% greater than its book value per share. The company intends to employ \$3 million worth of borrowed funds for the repurchase. The after-tax cost of borrowing is 6% and the company's reported earnings per share is \$5.00.

The percentage change in the company's book value per share following buyback is *closest* to:

- A. -0.23%.
- B. +0.19%.
- C. +11.11%

Correct Answer: A

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 38, LOS e

Book value per share (before buyback) = \$27 ($\30×0.90).

The company will repurchase 100,000 ($\$3,000,000/\30) of its shares using borrowed funds.

Post-buyback, the number of shares outstanding will equal 4,900,000 and the book value of equity will fall to \$132,000,000 [$(5,000,000 \times \$27) - \$3,000,000$] and the book value per share decreases from \$27.00 to \$26.94 ($\$132,000,000/4,900,000$) or a decline of -0.23% .

Questions 77 to 88 relate to Equity Investments

77. Pedro Lee serves a broker-dealer firm and has negotiated with Grace Arnold, the CEO of Chemco Solutions, to sell her significantly large holding of the company's stock. Lee apprehends that the order may be challenging to execute due to the size of the trade.

The execution mechanism that Lee should utilize is *most likely*:

- A. brokered markets.
- B. crossing networks.
- C. over-the-counter markets.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 45, LOS j

Brokered markets are most suitable because the trade may not be marketable due its significantly large size. Dealers may be unwilling or unable to hold such a large quantity of shares in their inventory and may not make markets in them; this renders over-the-counter (dealer) markets inappropriate. Organizing order-driven markets such as crossing networks is also not suitable because few traders may submit orders to them.

78. A market's limit order book quotes the best bid and offer at 35 and 38, respectively. A limit buy order with a price of 36 is placed by a trader. The order will *most likely*:
- A. make market.
 - B. make a new market.
 - C. fall behind the market.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 45, LOS g

Since the limit buy price (36) falls in between the best bid (35) and offer (38), the order will make a new market.

A buy order with a limit price equal to the best bid is said to make market.

A buy order with a limit price lower than the best bid is away from the market.

79. Jill Malcolm is studying a fundamental-weighted equity index which comprises of two stocks, A and B. Stock A has a market capitalization of \$450 million and earnings of \$100 million. Stock B has a market capitalization of \$300 million and earnings of \$100 million.

Relative to a market-weighted index, a fundamental-weighted index will:

- A. overweight A relative to B.
- B. overweight B relative to A.
- C. make an equal allocation to the two stocks.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 46, LOS d

Stock A has an earnings yield of 22.2% ($\$100/\450).

Stock B has an earnings yield of 33.3% ($\$100/\300)

The earnings weight of stock A ($\$100/\$200 = 50\%$) is lower than its market capitalization weight ($\$450/\$750 = 60\%$).

The earnings weight of stock B ($\$100/\$200 = 50\%$) is higher than its market capitalization weight ($\$300/\$750 = 40\%$).

Since stock B has a higher earnings yield, the fundamental-weighted index will overweight stock B relative to A. In contrast, a market-capitalization-weighted index will overweight stock A.

80. A fixed income analyst is studying the corporate bond sector in his country's fixed income market. After thorough analysis he concludes the value of a AAA-rated corporate bond placed by investors based on their complete understanding of the bond's interest rate, principal value and timing of its interest and principal payments is 90. The bond is currently selling at a price of 120.

Based on the results collected, the analysis can *most likely* conclude that:

- A. market prices accurately reflect intrinsic values.
- B. opportunities for profitable active investments exist.
- C. investors will take long positions in AAA-rated corporate bonds.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 47, LOS b

Since the intrinsic value does not equal to the market price of the bond, there exists an opportunity for active investment; investors will seek to short-sell these bonds which are selling at a price above their perceived intrinsic value (120 versus 90 respectively).

Given the discrepancy between market and intrinsic values, the analyst will least likely conclude that the former value accurately reflects the latter.

81. Samson Electrics, a Dutch component manufacturer, has issued 3.2% non-callable, non-convertible, perpetual preferred shares with a par value of €1,000. The credit rating provided by Standard & Poor's is AA- and the required return on identically rated preferred shares is 5.8%.

The intrinsic value of the preferred share is *closest* to:

- A. €551.72.
- B. €1,000.00.
- C. €1,812.50.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 14, Reading 50, LOS d

The intrinsic value of a non-callable perpetual preferred stock is €551.72, calculated using the equation below:

$$V_0 = \frac{D_0}{r} = \frac{(0.032 \times 1,000)}{0.058} = 551.72$$

82. Smith Richards is an equity analyst following the stock of Horizon Limited, a company in the telecommunications sector. The company's balance sheet for the year 2013 is presented below. Richards aims to ascertain whether Horizon's stock is fairly valued. The company has 5,000 shares outstanding, which are trading in the market at a price of \$20.50.

Exhibit:
Summarized Balance Sheet for Horizon
Limited for the Financial Year 2013*

Cash	\$3,500
Accounts Receivable	25,000
Inventories	4,300
Net fixed assets	45,000
Total assets	<u>77,800</u>
Accounts Payable	10,100
Notes Payable	2,500
Common shareholder's equity	<u>65,200</u>
Total liabilities and equity	<u>77,800</u>

*With the exclusion of net fixed assets, the market value of all assets and liabilities are equal to their book values. The market value of net fixed assets is 1.5 times its book value.

Based on Horizon Limited's book value per share, Richards will *most likely* conclude that its stock is:

- A. overvalued.
- B. fairly valued.
- C. undervalued.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 14, Reading 50, LOS j

Market value of assets = $\$3,500 + \$25,000 + \$4,300 + (1.5 \times \$45,000) = \$100,300$

Market value of liabilities = $\$10,100 + \$2,500 = \$12,600$

Adjusted book value = $\$100,300 - \$12,600 = \$87,700$

Estimated value (adjusted book value per share) = $\$87,700/5,000 = \17.54

Comparing the book value per share to the current market price of \$20.50, the Horizon Limited stock is overvalued.

83. Identifying the target market during the index construction process involves determining the:
- A. investment universe.
 - B. broadest definition of a market segment.
 - C. allocation to specific securities included in the index.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 46, LOS b

The target market determines the investment universe and the securities available for inclusion in the index.

84. The exhibit below illustrates the details concerning a price-weighted equity index.

Security	Beginning of period price	Weight (%)	Shares outstanding	Dividends per share	End of period price
A	15.5	20	1,000	0.25	13.0
B	25.0	20	1,000	1.00	22.0
C	128.5	20	1,000	0.75	145.0
D	200.0	40	2,000	0.25	230.5
Total			5,000		

The price return of the index is *closest* to:

- A. 3.04%.
- B. 4.33%.
- C. 12.65%.

Correct Answer: C

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 46, LOS b

$$\begin{aligned}\text{Beginning of period index value} &= (15.5 \times 1,000) + (25.0 \times 1,000) + (128.5 \times 1,000) + (200.0 \times 2,000) \\ &= 569,000\end{aligned}$$

$$\begin{aligned}\text{End of period index value} &= (13.0 \times 1,000) + (22.0 \times 1,000) + (145.0 \times 1,000) + (230.5 \times 2,000) \\ &= 641,000\end{aligned}$$

$$\begin{aligned}\text{Price return} &= (641,000/569,000) - 1 \\ &= 0.1265 \text{ or } 12.65\%\end{aligned}$$

85. The total return of a price-weighted index has changed relative to an equal-weighted index, identical in all other respects. Which of the following *least* accurately justifies the reason for the difference in values?
- A. Outperformance of large-cap stocks.
 - B. Outperformance of small-cap stocks.
 - C. A constituent stock has undergone a stock split.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 46, LOS d

Equal-weighted index comprise a significant proportion of small-cap stocks. Therefore the outperformance of small-cap stocks could be a reason for difference in values. Price-weighted indexes, on the other hand, are biased towards the higher priced shares.

A property unique to price-weighted indexes is that a stock split on one constituent security may change the weights on all the securities in the index. Therefore, this could be a possible reason for the difference in index values.

86. Brian Ross is a wealthy entrepreneur managing his own investment portfolio. He is seeking to expand his investment portfolio, which comprises solely of equities. Ross is seeking a tax-efficient investment, which has a moderate to high degree of liquidity and can bring diversification benefits to his portfolio. He is exploring direct real estate as a potential investment vehicle.

Which of the following factors will discourage Ross from investing in direct real estate?

- A. Illiquidity
- B. Tax consequences
- C. Low diversification potential

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 45, LOS c

Direct real estate are illiquid and trade in very illiquid markets making this form of investment unsuitable for Ross who desires an asset class with a moderate to high degree of liquidity.

Investments in real estate are attractive because of the tax benefits that they generate.

As an asset class, real estate has been found to have a low correlation with traditional asset classes such as equity and fixed income securities; this introduces diversification potential to an investor's portfolio.

- 87 The exhibit illustrates a market's standing limit order book at market close.

Exhibit: Market's Standing Limit Order Book

Bid Sizes	Limit Prices	Ask Sizes
	70	15
	69	13
	68	11
	67	10
4	65	
5	64	
6	63	
8	62	

What is the market?

- A. 65 bid and 67 ask
- B. 65 bid and 70 ask
- C. 62 bid and 67 ask

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 45, LOS g

The market is best bid (highest bid) and offer (lowest ask) and their associated sizes. Given the exhibit, market is at the 65 bid and 67 ask.

88. The exhibit below illustrates the limit orders outstanding on a market's book following the arrival of a large order.

Exhibit:
Market Limit Order Book

Buyer	Bid Size	Limit Price (€)	Offer Size	Seller
Jones	9	49.9		
Victor	8	50.0		
Stevens	6	50.1	7	Allen
		50.2	8	Cunningham
		50.3	12	Whittaker

Kim Toyama submits a day order to buy 18 contracts, limit €50.2. Toyama's average trade price is *closest* to:

- A. €49.96.
- B. €50.15.
- C. €50.18.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 13, Reading 45, LOS j

Toyama's buy order will fill at the most aggressively priced sell order which is Allen's order. After completely filling Allen's order at a price of €50.1, Toyama still has 11 contracts remaining. The next most aggressively priced sell order is Cunningham's that will fill completely leaving Toyama with 3 unfilled contracts. Toyama cannot trade using Whittaker's order as his limit sell price is above Toyama's limit buy price.

$$\begin{aligned}\text{Toyama's average trade price} &= [(7 \times €50.1) + (8 \times €50.2)] / (7 + 8) \\ &= €50.15\end{aligned}$$

Questions 89 to 94 relate to Derivatives

89. In contrast to interest rate options, forward rate agreements (FRAs):
- A. impose obligations on the counterparties.
 - B. are contracts with interest rate as the underlying.
 - C. are usually offered for purchase and sale by different dealers.

Correct Answer: A

Reference:

CFA Level 1, Volume 6, Study Session 17, Reading 58, LOS e

FRAs represent a commitment to make one interest payment and receive another at a future date. Thus the contract imposes obligations on both sides of the agreement.

The underlying in both agreements is an interest rate. FRAs and interest rate options are offered for purchase and sale by the same dealers.

90. Leslie Hower is a junior trader at a derivatives dealer firm. During her first week following appointment, Hower attempts to synthetically sell a risk-free bond using call and put options. She purchases call and put options with the same exercise price and time to maturity. She simultaneously sells the underlying short.

With respect to her attempts in creating a synthetic short position in a risk-free bond, however is *most* accurate regarding her decision to:

- A. purchase call options.
- B. purchase put options.
- C. sell the underlying short.

Correct Answer: A

Reference:

CFA Level 1, Volume 6, Study Session 17, Reading 60, LOS l

Based on the rearranged put-call parity (see below), in order to synthetically short sell (issue) a risk-free bond, call options should be purchased while the underlying and put options should be sold short.

$$-X/(1+r)^T = c_0 - p_0 - S_0$$

91. A dealer has established a protective put position by buying a stock worth \$85. A put option on the stock with an exercise price of \$94 is selling for \$11. For the dealer to breakeven, the stock price has to move:
- A. up at \$96.
 - B. up at \$105.
 - C. down at \$83.

Correct Answer: A

Reference:

CFA Level I, Volume 6, Study Session 17, Reading 59, LOS-b.

For the dealer to breakeven price should be at \$96 (\$85 + \$11).

92. An investor has invested in a bond selling for \$22.50. He has sold a call option for \$7.66 that has an exercise price of \$31.55. The investor expects the bond price to be \$45.00 at expiration. The maximum profit of the position is *closest* to:
- A. \$14.84.
 - B. \$21.11.
 - C. \$30.16.

Correct Answer: C

Reference:

CFA Level I, Volume 6, Study Session 17, Reading 59, LOS b.

The position is a covered call and the maximum profit for the investor is
 $= 45 - 22.50 + 7.66 = 30.16.$

93. The value of European call option is inversely related to the:

- A. exercise price
- B. time to expiration.
- C. value of the underlying.

Correct Answer: A

Reference:

CFA Level I, Volume 6, Study Session 17, Reading 58, LOS-i.

The value of European call option is:

- directly related to the time to expiration and the value of the underlying.
- inversely related to the exercise price.

94. A synthetic long position in a risk less bond is created by combining:

- A. a long position in a put + long position in the underlying + short position in the call.
- B. a long position in a call + long position in the underlying + short position in the put.
- C. a short position in a put + short position in the underlying + long position in the call.

Correct Answer: A

Reference:

CFA Level I, Volume 6, Study Session 17, Reading 58, LOS-m.

A synthetic long position in a risk less bond is created by combining a long position in a put + long position in the underlying + short position in the call.

$$\frac{X}{(1+r)^T} = p_o + S_o - c_o$$

Questions 95 to 106 relate to Fixed Income

95. The current market price of a three-year floating rate note (FRN) paying the six-month LIBOR plus 0.25% on a semi-annual basis is 98.70 per 100 of par value. The current six-month LIBOR is 1.05% and is expected to remain constant. Given that the interest payment each period is 0.650 per 100 of par value, the discount margin is *closest* to:

- A. 2.57%.
- B. 4.78%.
- C. 7.64%.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 53, LOS f

$$98.70 = \frac{0.650}{(1+r)^1} + \frac{0.650}{(1+r)^2} + \frac{0.650}{(1+r)^3} + \dots \frac{0.650+100}{(1+r)^{12}}$$

$$r = 0.007638$$

$$0.007638 = \frac{0.0105 + DM}{2}$$

$$DM = 0.004776 \text{ or } 4.78\%$$

96. Which of the following type of fixed income security has the lowest degree of interest rate risk?
- A. Fixed-rate bond
 - B. Floating-rate bond
 - C. Inflation-indexed bond

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 52, LOS e

A floating rate bond has the lowest degree of interest rate risk. This is because the bond's coupon rate is periodically reset based on changes in the level of a reference rate.

Fixed rate bonds have a higher level of interest rate risk. The bond's price decreases in response to an increase in interest rates. Thus investors who hold fixed-rate bonds are exposed to interest rate risk.

Inflation-indexed bonds protect against inflation risk.

97. A 180-day money market instrument is quoted at an add-on rate of 4.76% for a 360-day year. The bond equivalent yield of the instrument is *closest* to:
- A. 4.76%.
 - B. 4.83%.
 - C. 4.94%.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 53, LOS f

The redemption amount per 100 of par value of the instrument is 102.38 (calculated below).

$$PV = 100 + \left(100 \times \frac{180}{360} \times 0.0476\right) = 102.38$$

The bond-equivalent yield is 4.76%

$$AOR = \frac{360}{180} \times \left(\frac{102.38 - 100}{100}\right) = 0.0476 \text{ or } 4.76\%$$

Multiplying the add-on rate by the factor 360/365 yields a 365-day bond-equivalent yield of 4.83%.

$$\frac{365}{360} \times 0.0476 = 4.83\%$$

98. An investor purchases a five-year, 6% annual-coupon payment bond at 89.4535 and sells it in four years. Following the purchase of the bond and prior to the receipt of the first coupon, interest rates go down to 8.5%.

The realized yield on the bond investment is *closest* to:

- A. 3.77%.
- B. 5.79%.
- C. 8.71%.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 16, Reading 55, LOS a

The future value of the reinvested coupons at 8.5% is 27.2371 per 100 of par value.

$$[6 \times (1.085)^3] + [6 \times (1.085)^2] + [6 \times (1.085)^1] + 6 = 27.2371$$

The sales price of the bond is 76.4869 per 100 of par value:

$$\frac{106}{(1.085)^4} = 76.4869$$

The total return is 103.7240 (76.4869 + 27.2371) and the realized yield is 8.71%.

$$89.4535 = 103.7240 / (1 + r)^4$$

$$r = 0.03770$$

99. An 8.0% semi-annual coupon payment bond has an eight year maturity and is priced to yield 9.5%. The money duration and modified duration of the issue is 7.3524 and 5.3515, respectively. The full price of the issue is 106.35.

Ignoring the effects of convexity, the revised full price of the issue if yields increase by 125 basis points is *closest* to:

- A. \$96.58.
- B. \$99.24.
- C. \$116.12.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 16, Reading 55, LOS h

$$\Delta PV^{Full} = -MoneyDur \times \Delta Yield$$

$$\Delta PV^{Full} = -7.3524 \times 0.0125 = -0.091905 \text{ or } -9.1905\%$$

$$\text{New full price} = 106.35 \times (1 - 0.091905) = 96.5759$$

100. Which of the following issues has the highest seniority ranking in the event of default?

- A. Subordinated
- B. Senior unsecured
- C. Senior subordinated

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 16, Reading 56, LOS b

In terms of seniority ranking, senior unsecured debt holders have the highest priority claims followed by senior subordinated and finally subordinated debt holders.

101. ABC Inc. has invested in a 5-year convertible bond issue trading at a price of \$1,050. The issue is convertible into the issuer's common shares at an exercise price of \$40. The exhibit demonstrates the price of the issuer's stock over a five day term.

Exhibit:
Issuer Stock's Price per Share

Day	Price (\$)
1	36
2	32
3	42
4	40
5	34

Conversion parity will occur on Day:

- A. 1.
- B. 3.
- C. 4.

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 51, LOS f

On day 3, conversion parity will occur. This is because conversion value (\$1,050) will equal to the convertible's bond price (\$1,050).

Conversion parity occurs if conversion value = bond price

Conversion value = Current share price \times conversion ratio

Conversion ratio = $\$1,000 / \$40 = 25$

Conversion value (Day 1) = $\$36 \times 25$
= \$900

Conversion value (Day 3) = $\$42 \times 25$
= \$1,050

Conversion value (Day 4) = $\$40 \times 25$
= \$1,000

102. Which of the following characteristics are unique to partially amortized bonds?

- A. Balloon payment at maturity.
- B. Entire payment of principal occurs at maturity.
- C. Periodic payments of interest and principal repayments based on a schedule.

Correct Answer: A

Reference:

CFA Level I, Study Session 15, Reading 51, LOS e

A partially amortized bond makes fixed periodic payments until maturity but only a portion of the principal is repaid by the maturity date. Thus, a balloon payment is required at maturity to retire the bond's outstanding principal amount.

A bullet bond does not call for any principal repayments over the life of the bond. Instead, the entire payment of principal occurs at maturity.

103. Which of the following coupon payment structures will allow investors to benefit from an increase in interest rates?

- A. Plain vanilla bonds
- B. Floating rate notes (FRNs)
- C. Inverse FRNs

Correct Answer: B

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 51, LOS e

The coupon rate offered on FRNs is directly linked to the interest rate. Therefore, an increase in interest rate will increase the interest income received by investors.

Plain vanilla bonds offer a fixed coupon rate. Therefore, an increase in interest rates will decrease the value of the bond and result in no change in income earned by the investor.

The coupon rate offered on inverse FRNs is inversely related to the interest rate. Therefore an increase in interest rates will reduce the coupon rate and consequently the interest income earned by bond investors.

104. A company has issued a 15-year bond with a notional principal of \$350 million. The sinking fund provision calls for 8% of the outstanding principal amount to be retired in years 8-14 with the outstanding balance paid off at maturity in 15 years.

The outstanding principal balance at the end of Year 9 is *closest* to:

- A. \$294.00.
- B. \$296.24.
- C. \$322.00.

Correct Answer: B

Reference:

CFA Level I, Study Session 15, Reading 51, LOS e

The exhibit below demonstrated the sinking fund provision schedule for the first 9 years of the bond issue:

Year	Outstanding Principal at the Beginning of the Year (\$ millions)	Sinking Fund Payment (\$ millions)	Outstanding Principal at the End of the Year (\$ millions)
0			350.00
1 to 7	350.00	0.00	350.00
8	350.00	28.00	322.00
9	322.00	25.67	296.24

105. Which of the following issues is *most likely* classified as a domestic bond?

- A. A French company issues Euro-denominated bonds in Germany.
- B. A U.S. company issues U.S. dollar denominated bonds in Canada.
- C. A Swedish company incorporated in Japan issues Yen denominated bonds in Japan.

Correct Answer: C

Reference:

CFA Level I, Study Session 15, Reading 51, LOS d

Bonds issued by companies that are incorporated in that country are called domestic bonds. Out of the three options presented, the bonds issued by the Swedish company classify as domestic bonds.

106. A four-year 6% semiannual coupon payment corporate bond is priced at 110 per 100 of par value. Its yield to maturity is 7.87%, quoted on a semiannual basis. The annual rate of the bond that can be used for direct comparison with otherwise comparable bonds that make quarterly coupon payments is *closest* to:

- A. 7.79%.
- B. 8.02%.
- C. 15.74%.

Correct Answer: A

Reference:

CFA Level I, Volume 5, Study Session 15, Reading 53, LOS f

$$\left(1 + \frac{0.0787}{2}\right)^2 = \left(1 + \frac{APR_4}{4}\right)^4$$

$$APR_4 = [(1.0802)^{1/4} - 1] \times 4$$

$$= 7.794\%$$

Questions 107 to 112 relate to Alternative Investments

107. At the beginning of the year 2012, Gus Knight invested \$100,000 in a hedge fund with a “1 and 10” fee structure. The value of the fund at the end of the year rises to \$135,000 and by 5% at the end of 2013. Management and incentive fees are paid at the end of the year and are calculated independently. In the year a fund’s net value declines, incentive fees are not be paid.

The hedge fund’s high water mark at the end of 2013 is *closest* to:

- A. \$135,000.0.
- B. \$135,150.0.
- C. \$136,657.5.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS f

Beginning of year:

Management fees = $\$135,000 \times 1\% = \$1,350$

Incentive fees = $(\$135,000 - \$100,000) \times 0.10 = \$3,500$

Value of capital at beginning of year = $\$135,000 - \$1,350 - \$3,500 = \$130,150$

End of year:

Value of capital at end of year = $\$130,150 \times 1.05 = \$136,657.50$

In 2013, the value of the fund at the end of the year is greater than its beginning value. Therefore, the high water mark is established at \$136,657.50.

108. A drawback of investing in funds of hedge funds *most likely* includes:

- A. diluted returns.
- B. longer lockup periods.
- C. difficulty in conducting due diligence.

Correct Answer: A

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS e

A drawback of the multi-layered fee structure associated with funds of hedge funds is the net-of-fees returns are diluted to the investor. Benefits of investing in this hedge fund category include shorter lockup periods. Additionally, funds may provide expertise in and conduct due diligence in selecting the individual hedge funds.

The Alternative Investment section in the PM session is one question short. Kindly add the following question:

109. A key risk cited for investing in alternative investments includes:

- A. limited redemption availability.
- B. concentrated portfolio positions.
- C. reduced diversification potential.

Correct Answer: A

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS d

A risk cited for investing in alternative investments includes limited redemption availability and transparency, low liquidity and the challenge of manager diversification.

Alternative investments have a low correlation with traditional asset classes making this a benefit.

110. Which of the following real estate indices will *most likely* result in a sample selection bias?

- A. REIT index
- B. Appraisal index.
- C. Repeat sales index.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS d

Repeat sales index suffer from a sample selection bias because the properties that's ell in each period vary and may not be representative.

111. An analyst is calculating the one year price of a commodity futures contract with the following characteristics:

Spot price	\$80.96
Convenience yield	\$5.50
Storage costs	\$7.80

Risk free rate (R_f) = 5%

The price of a one year commodity future contract is *closest* to:

- A. \$82.71.
- B. \$83.26.
- C. \$87.31.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS d

Future Price = Spot Price $(1+R_f)$ + Storage Cost – Convenience Yield

Future Price = \$80.96 $(1+5\%)$ + \$7.8 - \$5.5 = \$87.31

112. Which of the following is *most likely* the motivation for a passive investor buying commodities for his portfolio?
- A. Speculation
 - B. Risk taking opportunity.
 - C. Risk diversification benefits.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS d

A passive investor buy commodities for his portfolio for the risk diversification benefits. A passive investor generally invest through a collateralized position in a future contract.

Questions 113 to 120 relate to Portfolio Management

113. Which of the following statements *best* describes the major drawback of the top down investment approach?
- A. This approach involves high active risk.
 - B. This approach involves high trading cost
 - C. Major portion of the portfolio is invested passively.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 44, LOS g

In top down investment process different managers manage the same client's portfolio, therefore trading costs are incurred by different managers. The higher the trading, the higher the tax expense associated with the realized capital gains.

114. Which section of the investment policy statement provides description regarding the custodian of the client's assets?
- A. Introduction
 - B. Investment guidelines
 - C. Statement of duties and responsibilities

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 44, LOS b

Option C is correct. Statement of duties and responsibilities section provides description regarding the duties and responsibilities of the client, the custodian of the client's assets and the investment managers.

115. Which of the following characteristic *best* describes an ETF?
- A. Low initial investment.
 - B. No uncertainty in price.
 - C. No cash flows during the investment period.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 41, LOS e

In case of ETF, dividends are paid out to the share holders so there is a direct cash flow from ETF. ETFs are subject to price uncertainty as they are traded at the prevailing market price, which changes.

116. Recourse Associates is an investment management firm located in the U.S. Bailey Gibbons is a portfolio manager serving the firm. Gibbons is managing the Global Developing Market Equity Fund (GDMEF) at Recourse. The assets under management and the net returns generated by the fund over the previous three years are summarized in an exhibit. The applicable tax rate is 30% and inflation is expected to remain stable at a rate of 1.5%. Net returns are prior to considering the effects of taxes and inflation.

Exhibit:

Information Concerning the GDMEF (Years 1-3)

Year	Assets Under Management at the Beginning of the Year (\$)	Net Return (%)
1	10 million	7
2	15 million	5
3	18 million	6

The real after-tax return of the fund in Year 2 is *closest* to:

- A. 1.97%.
- B. 2.41%.
- C. 3.50%.

Correct Answer: A

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 42, LOS a

The after-tax nominal net return is 3.5% [$5\% - (5\% \times 0.3)$]. The after-tax real return is $(1 + 3.5\%)/(1 + 1.5\%) - 1 = 1.97\%$.

Taxes are paid before incorporating the effects of inflation.

117. Mark Taylor is an equity investor who has recently purchased the stock of a Kenyan enterprise. The risk-free rate of return in Kenya is 4.5% while the expected return on the market index is 7.2%. The correlation of the stocks purchased with the market index has recently increased from 0.6 to 0.8 and the standard deviation of the stock and market index is 25.7% and 16.4% respectively.

The expected return on the Kenyan stock is *closest* to:

- A. 5.88%.
- B. 7.88%.
- C. 13.53%.

Correct Answer: B

Reference:

CFA Level I, Volume 1, Study Session 12, Reading 43, LOS g

$$B_i = \frac{\rho_{i,m} \sigma_i}{\sigma_m} = \frac{0.8 \times 0.257}{0.164} = 1.2537$$

$$E(R)_I = 4.5\% + 1.2537(7.2\% - 4.5\%) = 7.88499\%$$

118. Maya Thomas is an independent equity investor who has undertaken an investment in a Brazilian coffee manufacturer's stock. The covariance of the manufacturer's stock with the market index and market variance is 0.01577 and 0.01360 respectively.

Thomas can *most likely* anticipate earning a return on her equity investment that is:

- A. less than the risk-free rate.
- B. less than the market return.
- C. greater than the market return.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 43, LOS e

The beta of the stock is 1.1596 ($0.01577/0.01360$). A beta greater than 1.00 implies that the expected return on the stock is higher than the market return. A positive beta indicates that the required return will be greater than the risk-free rate.

119. With different borrowing and lending rates, the slope of the CML will become:
- A. curved to the left of the market portfolio.
 - B. kinked to the right of the market portfolio.
 - C. less steep to the right and left of the market portfolio.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 43, LOS b

With different borrowing and lending rates, the slope of the CML will become kinked beyond the point representing the market portfolio; beyond this point the graph will have a smaller slope.

The portion of the CML to the left of the market portfolio will continue to be represented by a straight line.

120. Writing an investment policy statement (IPS) is important because it:
- A. is recommended by codes of corporate governance.
 - B. can be used as a basis to determine the suitability of an investment.
 - C. allows identification of any conflict between a client's objectives and constraints.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 12, Reading 44, LOS a

An investment policy statement is important because it allows managers to determine the suitability of an investment based on the client's recorded objectives and constraints. It is important that the client's objectives are consistent with his/her constraints in the IPS.