

FinQuiz.com

CFA Level I 3rd Mock Exam

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FinQuiz.com – 3rd Mock Exam 2015 (PM Session)

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Questions 1 to 18 relate to Ethical Standards

1. 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 that 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.

2. 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.

3. 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.

4. 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.

5. 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 c

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.

6. 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 c*

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.

7. Joanne Lawson is an equity research analyst at Hilltop Associates, a portfolio management firm. For her firm's client accounts, Lawson is analyzing Redcliff, a software house, which is currently undertaking an IPO. Three years ago Redcliff's software developer built a stock forecasting model for Hilltop; the developer is no longer employed at the firm. However, Redcliff continues to provide technical support to Hilltop. Based on Lawson's discussion with competitors, industry analysts and the company's fundamentals, she forecasts above average performance in the years to come and rates the stock as 'buy'. Due to a time shortage, Lawson releases the report with a brief summary of the company's fundamentals and phrases the recommendation as in word – 'buy'. She signs off her report disclosing that additional information is available on request.

Lawson is in violation of the CFA Institute Standards of Professional Conduct relating to investment analysis, recommendations and actions because:

- A. she has not justified her recommendation.
- B. she has not disclosed the service arrangement with Redcliff.
- C. her recommendation lacks a reasonable and adequate basis.

Correct Answer: B

*Reference:**CFA Level 1, Volume 1, Study Session 1, Reading 2, LOS c*

The client-seller relationship Hilltop maintains with Redcliff may influence Lawson's independence and objectivity in producing a recommendation for the latter's stock. This is a matter that must be disclosed to clients and prospects so that they may judge any potential conflict of interest. By failing to do so, Lawson is in violation of the standard relating to disclosure of conflicts.

Based on the standard relating to communication with clients and prospects, communication can range from one word ("buy" or "sell") to in-depth reports. Given that Lawson has notified clients that additional information is available on request, Lawson is not in violation of restricting her recommendation to a single phrase.

Being based on a wide range of sources, Lawson has a reasonable and adequate basis for her recommendation.

8. Members and candidates can meet their obligations under the standard relating to performance presentation by:
 - A. maintaining records of data being used to calculate presented performance.
 - B. maintaining the relevance of performance history by removing terminated accounts.
 - C. ensuring the material is kept simple as well as comprehensible to all parties to whom the presentation is addressed.

Correct Answer: A

Reference:

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

Members and candidates can continue to meet the requirements of the Code and Standards with respect to performance presentation by:

- maintaining the data and records used to calculate the performance being presented
- including terminated accounts as part of performance history with a clear indication of when the accounts were terminated
- considering the knowledge and sophistication of the audience to whom a performance presentation is being addressed; this does not imply that the performance presentation should be kept simple and comprehensible.

9. According to the CFA Institute Standards of Professional Conduct, a member and candidate with outstanding agent options to buy stock as part of the compensation package for corporate financing activities should *least likely* disclose the associated:
- A. amount.
 - B. exercise price.
 - C. expiration date.

Correct Answer: B

Reference:

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

According to the recommended procedures for compliance, when holding outstanding agent options, members and candidates should disclose the amount and expiration date of the options.

10. An investment professional who takes advantage of his firm's controlling position in the forward market to manipulate the price of the underlying equity security is *most likely* in violation of:
- A. the Code of Ethics but not the Standards of Professional Conduct.
 - B. the Standards of Professional Conduct but not the Code of Ethics.
 - C. both the Code of Ethics and the Standards of Professional Conduct.

Correct Answer: C

Reference:

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

An investment professional who engages in practices that distort prices has violated both the Standards of Professional Conduct and Code of Ethics. The former is violated as the member has engaged in market manipulation while the latter is violated as the individual has not attempted to promote the integrity of and uphold the rules governing capital markets.

11. Richards Hamm serves a board member of a banking institution. This year Hamm has received an offer to serve on the board of a manufacturing enterprise as a nonexecutive. The position will not interfere with his present duties and he will receive a lifetime membership of the enterprises' recreational centre.

According to the CFA Institute Standards of Professional Conduct, Hamm:

- A. can accept the offer as long as prior written consent is obtained from his employer.
- B. can accept the offer without seeking approval since he is not receiving monetary compensation.
- C. cannot accept the offer as the additional compensation will compromise his independence and objectivity.

Correct Answer: A

Reference:

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

Hamm can accept the offer as long as he receives written consent from his employer prior to acceptance. The standard concerning additional compensation arrangements requires members and candidates to not accept gifts, benefits, compensation, or consideration until they receive a written consent from all relevant parties. Regardless of the fact that Lee is being awarded for his service in the form of nonmonetary compensation, consent is still warranted.

12. Beatrice Walsh received her CFA Institute membership six years ago. Walsh spaced her study for the three levels over a period of five years without failing on any attempt. However, Walsh has been unable to pay her membership dues in the current year due to financial problems, which have compounded following resignation from employment. She is currently seeking employment and makes the following two statements in a job interview:

Statement 1: I have always excelled at retaining concepts, which is why I believe I have been able to pass all three levels in consecutive attempts.

Statement 2: As a CFA charterholder I am committed to holding the highest ethical standards.

Which of the following statements *most likely* represents a violation of the Code and Standards?

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

Correct Answer: C

Reference:

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

Statement 1 represents a violation of the CFA Institute Standards of Professional Conduct. She has not passed all three levels in consecutive attempts and claiming she has done so represents a violation. Furthermore, Walsh implies that her ability to retain concepts makes her superior relative to other candidates. Thus Walsh is in violation of the standard relating to Reference to CFA Institute, the CFA designation, and the CFA program.

Statement 2 represents a violation as Walsh cannot claim membership to the CFA Institute until she pays her annual dues.

13. Which of the following represents a violation of the standard concerning Conduct as Members and Candidates in the CFA program?
- A. Predicting the topic areas to appear in an exam.
 - B. Claiming partial designation as a result of passing one level of the exam program.
 - C. Discussing questions which have appeared on a CFA exam program with candidates following its conclusion.

Correct Answer: C

Reference:

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

Conduct which is construed a violation of the standard in question includes providing exam information to candidates; this includes discussing exam questions. Predictions related to the contents of an exam are not confidential information and thus any attempt to do so does not represent a violation.

Claiming partial designation as a result of passing one level of the exam program represents a violation of the standard related to Reference to the CFA Institute, the CFA designation, and the CFA Program.

14. According to the Standards of Practice Handbook, which of the following is *least likely* considered confidential exam information?
- A. Contents of the Candidate Pledge.
 - B. Formulas that have not been tested in an exam.
 - C. The answer key developed for the written portions of the CFA Level II and III exams.

Correct Answer: A

Reference:

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

The contents of the Candidate pledge are not considered confidential information and are provided on the CFA Institute website, which can be accessed by all candidates.

Sharing formulas that have not been tested in an exam as well as the answer key developed for exam questions is considered a violation since both are considered confidential exam information.

15. At the beginning of the year Jason Lumes, who is managing the investment portfolio of Bastille Corp's defined benefit plan, receives a request from the company's chief executive to set up a trust for funding the treatment of patients with terminal illnesses. Under the arrangement Lumes will be using 5% of the commission fee earned from new pension fund clients referred to by Bastille Corp's chief executive. Lumes sets up an individual meeting with each of the new clients receiving their consent for the arrangement. Once the first round of commission income is donated to the trust, Lumes holds a meeting to disclose the arrangement to Bastille Corp's senior management that is not participating in the pension plan.

According to the Standards of Practice Handbook, Lumes is *most likely* in:

- A. compliance.
- B. violation; he has not disclosed the arrangement to the actual client.
- C. violation; he has delayed disclosure to Bastille Corp's senior management.

Correct Answer: B

Reference:

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

Lumes is in violation of the standard relating to referral fees because he has not made disclosure to the ultimate beneficiaries of the existing and new pension plans, which are his actual clients. Therefore, by failing to identify his actual clients, Lumes is in violation of the standard concerning loyalty, prudence, and care as well as referral fees.

Lumes is not required to disclose the referral fee arrangement to Bastille's senior managers as they are not participants of the pension plan and thus are not his clients. Any disclosure provided is not covered by the Code and Standards.

16. According to the *Standards of Practice Handbook*, once a compliance program is in place, a supervisor should:
- A. delineate procedures for reporting violations and sanctions.
 - B. distribute the contents of the program to all firm employees.
 - C. incorporate a professional conduct evaluation as part of an employee's performance review.

Correct Answer: C

Reference:

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

Once a compliance program is in place, a supervisor should, amongst other actions:

- distribute the contents of the program to the appropriate personnel and
- incorporate a professional conduct evaluation as part of an employee's performance review.

Procedures for delineating reporting violations and sanctions are a quality of adequate compliance procedures.

17. A key feature of the GIPS standards *most likely* includes:
- A. fair representation and full disclosure of investment performance.
 - B. the legal requirement to comply with the provisions of the GIPS standards.
 - C. including all actual, discretionary, non-fee- and fee-paying portfolio in at least one composite defined by a common investment mandate.

Correct Answer: A

Reference:

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

Key features of the GIPS standards include:

- The GIPS standards are ethical standards for investment performance presentation to ensure fair representation and full disclosure of investment performance.
 - Firms must comply with all the requirements of the GIPS standards, including any updates, guidance statements, interpretations, Questions & Answers, and clarifications published by CFA Institute and the GIPS Executive Committee. There is no legal requirement to comply with the provisions of the standards.
 - The GIPS standards require firms to include all actual, discretionary, fee-paying portfolios in at least one composite defined by investment mandate, objective or strategy.
18. If a member or candidate comes across material or nonpublic information, he should:
- A. disclose the information to his supervisor.
 - B. make reasonable efforts to achieve public disclosure of the information.
 - C. modify the current investment recommendation so it is contrary to the information.

Correct Answer: B

Reference:

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

If a member or candidate comes across material, nonpublic information, he should make reasonable efforts to achieve public dissemination of the information by encouraging the issuing company to make the information public. If public dissemination is not possible, the member should communicate the information to his supervisor or the firm's compliance department.

However, he should not alter current investment recommendations on the basis of the information.

Questions 19 to 32 relate to Quantitative Methods

19. Mark Richards is Tilk Enterprises' project manager. He is evaluating two pairs of construction projects (coded A, B, C and D). Out of the four projects Richards will be selecting only one; he intends to evaluate each pair independently using the NPV and IRR rule. Details concerning the projects are summarized in the exhibit below:

Exhibit:
Details Concerning Project Pairs

| | Pair 1 (A & B) | Pair 2 (C & D) |
|--------------------|--------------------------------------|-----------------------------------|
| Cash flow timing | A: End of period B: End of period | C: End of period D: Mid-period |
| Initial investment | A: \$150,000 B: \$95,000 | C: \$200,000 D: \$200,000 |

Based on the information presented in the exhibit, there will be a conflict in ranking generated by NPV and IRR for:

- A. Pair 1 only.
- B. Pair 2 only.
- C. both pairs.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 2, Reading 6, LOS b

The NPV and IRR will generate conflict rankings when the timing of projects' cash flows differs (as is the case with Pair 2) or when the size or scale of the projects differs (as is the case with Pair 1).

20. Compared to the time-weighted return, the money-weighted return will:
- A. remove the effect of cash flow timing on project return.
 - B. be less sensitive to the timing of cash flows into or out of the portfolio.
 - C. be depressed if a client gives the investment manager more funds to invest at an unfavorable time.

Correct Answer: C

*Reference:**CFA Level 1, Volume 1, Study Session 2, Reading 6, LOS d*

Compared to the time-weighted return, the money-weighted return will be depressed if a client gives the investment manager more funds to invest at an unfavorable time. The money-weighted return is sensitive to both the timing and amount of cash withdrawals or additions out of or into the portfolio. On the contrary, the time-weighted rate of return is insensitive to the timing of cash flows and amount of cash flows into or out of the portfolio.

21. Yard Inc maintains a defined contribution plan permitting employees to make annual contributions of \$35,000 into the plan. In order to generate the required annual contribution, several of Yard's employees invest \$35,000 per year in an exchange-traded fund that will pay an annual return of 8% for the next 40 years.

If the plan generates its promised return, the amount of money each employee will have for retirement after making the last payment is *closest* to:

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

Correct Answer: B

*Reference:**CFA Level 1, Volume 1, Study Session 2, Reading 5, LOS e*

The formula below will be used to calculate the future value (FV) of the annuity:

$$FV = \frac{(1+r)^N - 1}{r} = \$35,000 \times \frac{(1+0.08)^{35} - 1}{0.08} = \$6,031,088.13$$

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

Each quarterly payment paid by Lifeline Inc. to its bank is *closest* to:

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

Correct Answer: B

Reference:

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

Present value annuity factor =

$$\left[\frac{1 - \frac{1}{(1 + r_s / m)^{mN}}}{r_s / m} \right] = \frac{1 - \frac{1}{(1 + 0.06/4)^{4 \times 20}}}{0.06/4} = 46.407323$$

$$\begin{aligned} A &= PV / \text{Present value of annuity factor} \\ &= \$300,000 / 46.4072 = \$6,464.4500 \end{aligned}$$

23. Which of the following probabilities is estimated using little to no data and is relevant to investment decision-making?
- A. priori probability.
 - B. empirical probability.
 - C. subjective probability.

Correct Answer: C

Reference:

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

The subjective probability is drawn based on personal or subjective judgment requiring very little data and is of great importance in investments. Investors making buy and sell decisions that determine asset prices, often draw on subjective probabilities.

24. Lance Hope is a portfolio manager selecting global stocks for his clients' portfolios. Put of the sixteen being analyzed, Hope will shortlist five countries from which stocks will be purchased.

The possible combinations of five country stocks Hope can create are *closest* to:

- A. 174.
- B. 4,368.
- C. 524,160.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 8, LOS o

$${}_nC_r = \binom{n}{r} = \frac{n!}{(n-r)!r!} = \frac{16!}{(16-5)!5!} = 4,368$$

25. A desirable statistical property of an estimator *most likely* includes:

- A. precision.
- B. consistency.
- C. effectiveness.

Correct Answer: C

Reference:

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

Desirable properties of an estimator include unbiasedness, efficiency, and consistency.

26. Selena Roberts manages an equity fund allocated to U.S. and Canadian equities in the proportions 45% and 55% respectively. The expected returns and covariances between the two equities are illustrated in the exhibit below:

Exhibit:
Equity Fund, Expected Returns & Covariances

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

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

- A. 0.00.
- B. 0.05.
- C. 0.47.

Correct Answer: C

Reference:

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

$$\begin{aligned} \rho(R_{U.S., Canadian}) &= \text{Cov}(R_{U.S.}, R_{Canadian}) / (\sigma(R_{U.S.}) \sigma R_{Canadian}) \\ &= 125 / [(200)^{0.5} (350)^{0.5}] = 0.47 \end{aligned}$$

27. The Central Limit Theorem:

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

Correct Answer: A

Reference:

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

The Central Limit Theorem requires the population variance to be finite and asserts that if the sample size is large, the distribution of sample mean will be approximately normal. The assertions made by the Central Limit Theorem are not restricted to a normally distributed population.

28. Martin Kallos is an equity market analyst who is forecasting that the market price of Nathan Inc.'s stock will increase over the next quarter. Kallos predicts that the market price will increase by 2% in the first month, with a probability of 0.35, followed by 3%, with a probability of 0.15, over the remaining three months. The second price increase will only occur if the first materializes.

The probability that the stock price will increase by 3% given that it has increased by 2% is *closest* to:

- A. 0.018.
- B. 0.123.
- C. 0.429.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 8, LOS f

If the price increases by 3%, it is certain that the price has already increased by 2%. Therefore, $P(\text{Price increases by 2\%} / \text{Price increases by 3\%}) = 1$.

The joint probability of the occurrence of both events is expressed as:

$P(\text{Prices increases by 3\% and price increases by 2\%}) = P(\text{Price increases by 2\%} / \text{Price increases by 3\%}) P(\text{Price increases by 3\%})$.

$P(\text{Price increases by 3\% and price increases by 2\%}) = 1(0.15) = 0.15$

The joint probability can also be expressed as:

$P(\text{Prices increases by 3\% and price increases by 2\%}) = P(\text{Price increases by 3\%} / \text{Price increases by 2\%}) P(\text{Price increases by 2\%})$.

$0.15 = P(\text{Price increases by 3\%} / \text{Price increases by 2\%}) (0.35)$
 $(\text{Price increases by 3\%} / \text{Price increases by 2\%}) = 0.4286$

29. Which of the following assumptions *most likely* underlies technical analysis?
- A. Market trends and patterns reflect rational human behavior.
 - B. Impact on market pricing is based on the collective sentiment of traders.
 - C. Trends and patterns are often unpredictable giving an opportunity to earn abnormal returns.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS a

A key tenet of technical analysis is that the market reflects the collective knowledge and sentiment of varied participants and the amount of buying and selling in a particular security. Therefore, only those buying and/or selling a security will have an impact on price.

Technicians believe that market trends and patterns tend to repeat themselves and are somewhat predictable.

Technicians assume that market trends and patterns reflect irrational human behavior.

30. Janice Mackintosh is performing statistical analysis on the equity market of Algeria. She is attempting to predict the effects of a recent technology regulation on the forecasted EPS of software houses. She collects financial data concerning 40 software houses. Mackintosh calculates population mean using EPS values of \$25.6 and \$40.5. Based on her collected sample she forecasts that the EPS value is expected to equal \$35.2.

Based on the data collected and using the central limit theorem, the standard error of the sample mean is *closest* to:

- A. 0.0087.
- B. 0.0187.
- C. 0.1185.

Correct Answer: B

Reference:

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

$$s^2 = \frac{\sum_{i=1}^n (X_i - \bar{X})^2}{n-1} = \frac{[35.2 - 33.05]^2}{40-1} = 0.118526$$

$$* \bar{X} = (40.5 + 25.6)/2 = 33.05$$

Since the population standard deviation is unknown, the formula below is used to calculate the standard error of the sample mean:

$$s_{\bar{X}} = \frac{s}{\sqrt{n}} = \frac{0.118526}{\sqrt{40}} = 0.018741$$

31. Karim Heth is a technical analyst following the stock of Brown Enterprises, a textile manufacturer. He believes that a double-bottom pattern exists based on data concerning average price changes observed over the recent most four financial years (Exhibit). He decides to exit his existing long position by selling the Brown stock and estimates that the strategy can be executed at a price target of \$16.62.

Exhibit:

Price Change Data:2010-2013

| Month | Market Price (\$) |
|-------|-------------------|
| 2010 | 38.87 |
| 2011 | 54.40 |
| 2012 | 35.50 |
| 2013 | 54.38 |

Based on Heth's analysis, he is *most likely* incorrect regarding the:

- A. price target.
- B. position to be taken.
- C. identified chart pattern.

Correct Answer: C

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS d

Heth is incorrect regarding the identified chart pattern. The observed price pattern illustrated is characteristic of a double-top pattern as the price peaked at \$54.40 before declining to \$35.50 and rebounding once again to a level around the peak. Heth has correctly estimated the price target as \$16.62 [$\$35.50 - (\$54.38 - \$35.50)$].

Since the price is forecasted to decline and then rebound, a short position will allow Heth to capitalize on the anticipated trend reversal.

32. A rate of change (ROC) oscillator which crosses into positive territory signals that the asset:
- A. is overbought.
 - B. should be purchased.
 - C. price will experience a trend reversal.

Correct Answer: B

Reference:

CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS e

A ROC oscillator that crosses into positive territory is a signal that the asset should be purchased (a buy signal).

Questions 33 to 44 relate to Economics

33. If the income effect dominates the substitution effect, the impact of higher interest rates on the level of savings is *most likely*:
- A. neutral.
 - B. positive.
 - C. negative.

Correct Answer: C*Reference:**CFA Level 1, Volume 2, Study Session 4, Reading 14, LOS m*

If the income effect dominates the savings effect, higher interest rates will suggest less savings are required to attain a given sum of money for the future resulting in individuals substituting present consumption for future consumption. In this event, it is possible to observe higher interest rates resulting in lower savings.

34. Recordia is a German seller of smart music players. Recordia's monthly supply of music players is given by the equation,

$$Q_{sp}^s = -50.5 + 28.5P_{sp} - 4.5W$$

where Q_{sp}^s is the number of smart music players sold, P_{sp} is the price of players sold in euros, and W is the wage rate in euros paid by smart music player sellers to laborers. Per unit price of a smart music player is €225 and wage is €13.50. There are currently five sellers producing smart music players identical to Recordia.

Based on the data provided, the slope of the aggregate market supply curve is *closest* to:

- A. 0.007.
- B. 50.500.
- C. 142.500.

Correct Answer: A

Reference:

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

The slope of the supply curve is the coefficient on Q_{sp} in the inverse supply function. The inverse supply function is calculated below.

Holding W constant at 13.50 and inserting it in the supply function provided, the value of P_{sp} needs to be determined.

$$Q_{sp}^s = 5[-50.5 + 28.5P_{sp} - 4.5(13.5)] = -556.25 + 142.5P_{sp}$$

Inverting the supply function, $P_{sp} = 3.904 + 0.007 Q_{sp}^s$

35. A decrease in the price of a good is followed by a decrease in consumption if:
- A. the good is normal.
 - B. income effect dominates the substitution effect and the good is inferior.
 - C. a positive income effect dominates the substitution effect and the good is Giffen.

Correct Answer: B

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 14, LOS m

A decrease in the price of a good will result in the consumer reducing its purchases if the good is inferior and the income effect dominates the substitution effect. Although a decrease in price will cause a consumer to buy more, the effect is mitigated due to the income effect; the consumer will want to purchase less of that good as income rises.

In the case of Giffen goods, a decrease in price will decrease consumption if the decrease in price is strong enough as well as negative to overpower the substitution effect.

36. The exhibit below summarizes financial data for ABC Inc., which was incorporated on January 1, 2013.

Exhibit:
Financial Data for ABC Inc. for the Year 2013

| | |
|----------------------------|--------|
| Total revenue (\$) | 38,560 |
| Total economic costs (\$) | 25,315 |
| Accounting profit | 15,000 |
| Cost of equity capital (%) | 12% |

The level of accounting profit needed to cover the opportunity costs of capital is *closest* to:

- A. \$1,755.
- B. \$13,245.
- C. \$25,315.

Correct Answer: A

Reference:

CFA Level 1, Volume 2, Study Session 4, Reading 15, LOS a

The level of accounting profit needed to cover the opportunity costs of capital is defined as normal profit.

Economic profit = Total revenue – Total economic costs = \$38,560 – \$25,315 = \$13,245

Accounting profit = Economic profit + Normal profit

Normal profit = Accounting profit – Economic profit = \$15,000 – \$13,245 = \$1,755

37. A fiscal policy may be able to stabilize aggregate demand completely because:
- A. relevant data often appear well before a policy decision needs to be made.
 - B. there is uncertainty of where the economy will be heading independent of policy changes.
 - C. private sector behavior may change as discretionary fiscal adjustments are announced.

Correct Answer: A

Reference:

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

The fiscal policy may not be able to stabilize aggregate demand completely as a policymaker may not have complete information on how the economy functions. For instance, it may take several months for a policymaker to realize an economy is slowing because data may appear with a considerable lag.

Secondly, there is uncertainty of where the economy will be heading independent of policy changes.

Thirdly, when fiscal adjustments are announced private sector behavior may change leading to rises in consumption or investment, both of which will reinforce the effects of a rise in government expenditure.

38. The exhibit below illustrates economic data concerning Giyata (local currency, GT), a developing country in Africa.

Exhibit:
Economic Data Concerning Giyata

| | GT (millions) |
|---|---------------|
| Domestic business investment in capital goods | 45.7 |
| Domestic business investment in inventories | 23.6 |
| Exports | 12.2 |
| Domestic business investment in owner-occupied property | 21.0 |
| Government spending on final goods and services | 28.8 |
| Transfer payments | 8.9 |
| Imports | 10.5 |
| Net tax revenue collections | 14.2 |

The GDP for Giyata, based on the expenditure approach, is *closest* to (in GT millions):

- A. 99.8.
- B. 122.9.
- C. 143.9.

Correct Answer: A

Reference:

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

All figures are in GT millions.

GDP = Consumer spending on final goods and services + Gross domestic private investment* +

Government spending on final goods and services** + Exports – Imports

$$\text{GDP} = 45.7 + 23.6 + 28.8 + (12.2 - 10.5) = 99.8$$

*Gross domestic private investment includes business investment in capital goods and inventory investment

**Transfer payments are not included in government spending on final goods and services because they are a monetary transfer by the government of tax revenue back to individuals with no corresponding receipt of goods and services.

39. In an effort to boost economic growth, the ratio of government spending to tax collection revenue in Belarus has exceeded 1.0 for the past two years. This trend is expected to continue for the foreseeable future. For the aggregate income to equal aggregate expenditure, the:
- A. country should run a trade surplus.
 - B. country should increase foreign borrowings.
 - C. private sector should increase domestic investment.

Correct Answer: B

Reference:

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

When a country runs a fiscal deficit, $G - T > 0$, the private sector must save more than it invests $S - I > 0$, the country should run a trade deficit ($X - M < 0$) with a corresponding inflow of foreign saving, or both.

40. In the year 2013 the quantity of money on hand in a country, in local currency units, amounted to 450 million. During the year the average number of times the local currency changed hands was equal to 58. The country's GDP, in real terms, amounted to 300 million.

If money neutrality holds and all else is held constant, an increase in the supply of money by 2% will *most likely*:

- A. decrease velocity to 56.86.
- B. increase price level to 88.74.
- C. increase real output to \$306 million.

Correct Answer: B

Reference:

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

Based on the quantity theory of money, if money neutrality holds, then an increase in the money supply (M) will not affect Y, real output, or the speed with which money changes hands, V. However, it would cause the aggregate price level to rise. To determine the level to which price level rises, the following equation is used:

$$M \times V = P \times Y$$

$$P \text{ (before increase in money supply)} = (450,000,000 \times 58) / 300,000,000 = 87.00$$

$$P \text{ (after increase in money supply)} = 87 \times 1.02 = 88.74$$

41. Which of the following fiscal stances will be *most* effective in boosting aggregate demand?
- A. Expanding the supply of money.
 - B. Exploration of natural resources.
 - C. Enhanced public spending on social goods.

Correct Answer: C

Reference:

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

An expansionary fiscal policy helps in boosting aggregate demand. An expansionary policy can include enhanced (new) public spending on schools, social goods, hospitals and infrastructure.

42. Currently the USD/GBP spot rate is 1.6736 while the three month forward rate is 1.6745.

Which of the following is the *best* interpretation of the forward discount/premium?

- A. The interest rates in Great Britain are higher than those in United States.
- B. The real value of the USD/GBP spot rate will appreciate in the next 90 days.
- C. The interest rates in the United States are higher than those in Great Britain.

Correct Answer: A

Reference:

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

The GBP is selling at a forward premium of 0.009 ($1.6745 - 1.6736$). A forward premium indicates that interest rates in the foreign currency (the United States, which uses dollars) are higher than those in the base currency (Great Britain, which uses the pound).

43. The Moroccan government authorities have launched a program whereby they intend to enhance spending on public infrastructure as well as develop schools and hospitals. To offset the effects of the fiscal policy, the country's central bank is reducing money supply.

What are the implications of the two policies on Morocco's economy?

- A. Interest rates will be reduced.
- B. Reduction in private sector demand.
- C. Growth in private and public sectors.

Correct Answer: B

*Reference:**CFA Level 1, Volume 2, Study Session 5, Reading 19, LOS s*

An easy fiscal policy will lead to a rise in aggregate output. If this policy is accompanied by a tight monetary policy, interest rates will rise and have a negative effect on private sector demand. While the public sector may expand due to increased government spending, the private sector will shrink due to a fall in demand.

44. Lance Richard is a British investor holding Malaysian equities in his investment portfolio. The current nominal spot value of a MGR is GBP 5.56 and is expected to increase by 5% by the end of the year. The current annual British and Malaysian price level is 103 and 98, respectively.

The GBP price level is forecasted to decrease by 2% while the Malaysian price level will increase by 3%.

Based on the forecast data, the real value of the MGR will:

- A. rise to 5.84.
- B. rise to 6.14.
- C. decline to 5.28.

Correct Answer: A*Reference:**CFA Level 1, Volume 2, Study Session 6, Reading 21, LOS c*

Spot real exchange rate (GBP/MGR) = $5.56 \times (98/103) = 5.29$

Change in real exchange rate =

$$\left(1 + \frac{\Delta S_{d/f}}{S_{d/f}}\right) \times \frac{\left(1 + \frac{\Delta P_f}{P_f}\right)}{\left(1 + \frac{\Delta P_d}{P_d}\right)} - 1 = (1 + 5\%) \times \frac{1 + 3\%}{1 - 2\%} - 1 = 0.10357$$

Forecasted real exchange rate (GBP/MGR) = $1.10357 \times 5.29 = 5.84$

Questions 45 to 68 relate to Financial Reporting and Analysis

45. Which audit opinion *most likely* signals to investors that a company's financial statements are unreliable?
- A. Adverse
 - B. Unqualified
 - C. Disclaimer of opinion

Correct Answer: A

Reference:

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

An adverse audit opinion is issued when the financial statements materially depart from the accounting standards and are not fairly presented. The opinion signals to investors that financial statements cannot be relied on.

An unqualified audit opinion is issued when the financial statements give a true and fair view or are fairly presented in accordance with the applicable accounting standards.

A disclaimer of opinion is issued when there is a scope limitation and the auditors are unable to issue an opinion.

46. Blue Ridge had an average-days-of-sales outstanding (DSO) period of 65 days in 2011. Total sales (all on credit) were \$2.5 million in the same year. Company management believes days on sales outstanding will decline to 60 days in response to a more stringent credit collection policy. Credit sales are anticipated to increase to \$2.8 million. There are 365 days in a fiscal year.

In order to meet management projections, the required change in average accounts receivable should be *closest* to:

- A. – 8.33%.
- B. + 3.38%.
- C. + 12.00%.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 10, Reading 34, LOS b

$DSO = (\text{Average accounts receivable} / \text{Total credit sales}) \times \text{number of days}$

Average accounts receivable (2011) = $(DSO \times \text{total credit sales}) / \text{number of days}$
 $= (65 \times \$2,500,000) / 365 = \$445,205.48$

Average accounts receivable (2012) = $(60 \times \$2,800,000) / 365 = \$460,273.97$

Required change in accounts receivable = $(\$460,273.97 / \$445,205.48) - 1 = 3.38\%$

47. A company has reported total deferred tax assets and liabilities amounting to \$35,000 and \$50,000 respectively in its balance sheet for the year ended 2012. In the fiscal year 2013, the statutory tax rate increased from 30% to 35%.

Which of the following *most* accurately illustrates the effect of the increase in tax rate on the deferred tax accounts?

| | Deferred tax asset: | Deferred tax liability: |
|----|------------------------|----------------------------|
| A. | Increase | Increase |
| B. | Decrease | Increase |
| C. | Increase | Decrease |

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 31, LOS d

An increase in the statutory tax rate should increase the deferred tax asset and liabilities reported on the company's balance sheet.

48. Clay Corp issued a €2,100,000 face-value sevenyear bonds on January 1, 2010, when the prevailing market interest rate was 5%. The bonds pay 4% interest annually on December 31.

Using the effective interest rate method, at year end Clay Corp will report:

- A. a liability with a carrying value of €1,993,410.
- B. interest expense of €84,000 on its income statement
- C. sale proceeds of €2,100,000 in association with thebond issue.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 32, LOS b

At the time of issue, sale proceeds are equal to €2221,514 (see below).

$PMT = 84,000 (2,100,000 \times 4\%)$; $N = 7$; $I/Y = 5\%$; $FV = 2,100,000$

$CPT PV = €1,978,486.16$

On January 1, 2010 the bond is reported at a value equal to the sale proceeds at issuance.

$\text{Interest expense (2010)} = €1,978,486.16 \times 5\% = €98,924.3$

Carrying amount (December 31, 2010) = Sales proceeds + (interest expense – interest payments)

$\text{Carrying amount} = €1,978,486.16 + [€98,924.31 - (€2100,000 \times 4\%)]$
 $= €1,993,410$

49. Oxygenic Corp recognized a deferred tax asset of \$50,000 in relation to differences in acceptable depreciation methods for tax and accounting purposes. The deferred tax asset was reduced by \$5,000 using a valuation allowance in the following year.

Which of the following reasons *most* accurately justifies the reason for the reduction?

- A. The deferred tax item is more relevant to equity.
- B. There will be taxable income available in the near future.
- C. There is a high probability that the deferred tax asset will not be realized.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 9, Reading 31, LOS g

The reduction of a deferred tax asset by a valuation allowance suggests that there is a doubt about the recovery of the deferral.

50. Lica, a garment manufacturer, purchased an item of equipment for \$300,000 in 2011. The original estimated life of the equipment was five years and residual value \$25,000. The company originally applied the double declining balance method of depreciation to the equipment. The company's management revised the method to straight line in the beginning of the 2012 fiscal year.

Compared to the previously used depreciation method, the company's reported depreciation expense in 2012 will be higher by:

- A. \$17,000.
- B. \$21,000.
- C. \$33,250.

Correct Answer: C

Reference:

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

The decision to change the useful life estimate will decrease depreciation expense by \$33,250 (\$72,000 – \$38,750).

Double declining method:

Depreciation expense (2011) = $1/5 \times 2 \times \$300,000 = \$120,000$

Net book value (2011) = $\$300,000 - \$120,000 = \$180,000$

Depreciation expense (2012) = $1/5 \times 2 \times (\$180,000) = \$72,000$

If the straight line method is adopted in 2012, the annual depreciation expense will amount to \$38,750 $[(\$180,000 - \$25,000)/4]$.

51. Cross-sectional analysis can be performed as long as the companies under analysis:
- A. are of roughly equal size.
 - B. are in the same time period.
 - C. operate in the same currency.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 28, LOS a

Cross-sectional analysis is typically performed by comparing companies in one time period. The companies might be of different sizes and/or operate in different currencies.

52. Lightline, a component manufacturer, has reported average payables and ending payables of \$12,450 and \$10,785 respectively for the year 2013. On average Lightline takes 57 days to pay its suppliers. The company would like to shorten this to a minimum of 45 days next year in order to take advantage of early payment discounts. The company expects to make \$80,000 worth of purchases in 2014.

Assuming there are 365 days in a financial year and Lightline achieves its targets, the company's closing balance of account payables in 2014 will be *closest* to:

- A. \$8,941.05.
- B. \$9,863.03.
- C. \$32,444.44

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 28, LOS b

To reduce number of days of payables to 45, the payables turnover measure should equal 8.1111 (see below).

Number of days of payables = number of days in period/payables turnover

Payables turnover (2014) = $365/45 = 8.1111$

Payables turnover = Purchases/average trade payables

Average trade payables (2014) = $\$80,000/8.1111 = \$9,863.03$

Average trade payables (2014) = (Beginning payables + Ending payables)/2

Ending payables = $[(\$9,863.03 \times 2) - 10,785] = \$8,941.05$

53. Which of the following factors will *most likely* contribute to an extension of the cash conversion cycle?
- A. Faster repayments to creditors.
 - B. Stringent customer credit policy.
 - C. Shorter inventory holding period.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 28, LOS b

Cash conversion cycle = Days of sales outstanding + Days of inventory on hand – Number of days of payables

Faster repayment to creditors suggests lower number of days of payables and thus a longer cash conversion cycle.

A stringent customer credit collection policy will reduce the number of days of sales outstanding and thus shorten the cash conversion cycle.

Shorter inventory holding periods will reduce the number of days of inventory on hand and thus shorten the cash conversion cycle.

54. The exhibit below highlights data concerning total assets reported by two manufacturing concerns, Greena and Ice, in their respective balance sheets.

| | Greena Percent of Total Assets | Ice Percent of Total Assets |
|----------------------------------|--------------------------------------|-----------------------------------|
| Cash | 2 | 7 |
| Receivables | 11 | 16 |
| Inventory | 9 | 11 |
| Fixed assets net of depreciation | 70 | 58 |
| Investments | 8 | 8 |
| Total assets | 100 | 100 |

Using vertical common-size analysis, which of the following conclusions is *least* valid? Relative to:

- A. Ice, Greena is more liquid.
- B. Greena, Ice has a lower proportion of credit sales.
- C. Greena, Ice is deploying its fixed assets in a more effective manner.

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 28, LOS c

Fixed asset turnover is measured as Revenue/Fixed assets. Greena's fixed asset turnover is 1.429 (1/0.70) while Ice's turnover ratio is equal to 1.724 (1/0.58). Since Ice has a higher ratio, it is deploying its fixed assets in a more effective manner relative to its competitor.

Ice is more liquid relative to Greena as the former has 7% of assets available in cash.

Based on the percentage of receivables to sales, one can conclude that Greena has a relatively lower proportion of credit sales.

55. Lance Mansfield is a financial analyst examining Westmore's sales and purchase activities for the month of April, its first month of operations. She has collected the relevant data in the exhibit below. Westmore applies the LIFO method of inventory accounting.

Exhibit:
Sale and Purchase Activity For the Month of April

| Date | Transaction | Unit Price |
|----------|---------------------|------------|
| April 1 | Purchased 50 units | \$8 |
| April 10 | Sold 100 units | \$15 |
| April 15 | Purchased 350 units | \$12 |
| April 18 | Purchased 80 units | \$13 |
| April 23 | Sold 220 units | \$15 |
| April 30 | Purchased 45 units | \$13 |

Westmore's ending inventory balance is *closest* to:

- A. \$1,640.
- B. \$2,260.
- C. \$3,965.

Correct Answer: B

Reference:

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

Ending inventory using the LIFO method comprises of the oldest units of inventory on hand.

Total units sold in April = $100 + 220 = 320$

Under this method the 45 units purchased last are assumed to be sold first followed by the 80 units purchased on April 18. The remainder 195 units ($320 - 45 - 80$) are assumed to be sold from the 350 units purchased on April 15. Only 155 units remain unsold from the April 15 purchase while the units purchased on April 1 are assumed to remain unsold.

Ending inventory = $(50 \times \$8) + (155 \times \$12) = \$2,260$.

56. Rochedale is a manufacturing concern preparing and presenting its financial statements in accordance with IFRS. Thomas Gayle, an independent financial analyst, is attempting to ascertain whether the company's ability to meet interest obligations has improved between the years 2012 and 2013. Rochedale classifies the interest and dividends being paid as a use of cash in the operating section of the cash flow statement. The company does not have any preferred shares of stock outstanding.

Exhibit:

Selecting Financial Information for Rochedale

| £'000s | 2013 | 2012 |
|---------------------------|------|------|
| Cash flow from operations | 352 | 380 |
| Interest paid | 48 | 40 |
| Taxes paid | 68 | 65 |
| Dividends paid | 183 | 50 |
| Long-term debt | 125 | 100 |

Between 2012 and 2013, Rochedale's ability to meet interest obligations has *most likely*:

- A. improved.
- B. deteriorated.
- C. remain unchanged.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 27, LOS i

Ability to meet interest obligations is measured by the interest coverage ratio. Given that this ratio has increased (see below), the company's ability to meet interest obligations has improved.

Interest coverage = (CFO + Interest paid + Taxes paid)/Interest paid

Interest coverage (2012) = (380 + 50* + 40 + 65)/40 = 13.375

Interest coverage (2013) = (352 + 183* + 48 + 68)/48 = 13.563

*If the company reports dividends paid as a use of cash in the operating section, total dividends should be added back to CFO.

57. The payment of a stock dividend is *most likely*:
- A. not disclosed on the cash flow statement.
 - B. disclosed as an operating cash flow under U.S. GAAP.
 - C. disclosed as either a (n) operating or financing cash flow under IFRS.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 27, LOS c

The payment of a stock dividend represents a non-cash transaction; no cash changes hands when dividend payments are made by issuing shares of stock. Non-cash transactions are not reported (or disclosed) on the cash flow statement but are instead required to be disclosed either in a separate note or a supplementary schedule to the cash flow statement. The treatment for stock dividends is the same under IFRS and U.S. GAAP.

58. The exhibit below highlights selective financial information from Klienveldt Incorporated's balance sheet and cash flow statement for the years 2012 and 2013. The company uses the direct format for preparing its cash flow statement.

| \$'000s | 2013 | 2012 | Change |
|----------------------------|------|------|--------|
| Wages payable | 48 | 35 | + 13 |
| Taxes payable | 169 | 180 | – 11 |
| Deferred tax asset | 32 | 30 | + 2 |
| Cash paid for income taxes | 78 | 74 | + 4 |
| Cash paid to employees | 15 | 15 | 0 |

The amount of income tax and wages expense reported by Kleinveldt in its income statement for the year 2013 is *closest* to:

| | income tax expense: | wages expense: |
|----|------------------------|-------------------|
| A. | (\$5,000) | \$13,000. |
| B. | \$67,000 | \$28,000. |
| C. | \$89,000 | \$2,000. |

Correct Answer: B

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 27, LOS f

All figures are in \$'000s

Cash paid for income taxes = Income tax expense – increase in income tax payable

Income tax expense = 78 + (– 11) = 67

Cash paid to employees = Wages expense – Increase in wages payables

Wages expense = 15 + 13 = 28

59. In 2013, Trans Inc. reported \$250,000 as income tax payable based on income for tax purposes. The tax expense reported on its income statement is equal to \$180,000. Trans Inc. will *most likely* report the difference between the two tax amounts as:
- A. a deferred tax asset.
 - B. a deferred tax liability.
 - C. comprehensive income.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS d

When the actual income tax payable based on income for tax purposes exceeds (is lower than) the amount of income tax based on reported financial statement income, a deferred tax asset (liability) is reported on a company's balance sheet.

60. On March 30, 2013 Builders, a construction firm, recorded an impairment loss of \$4,500 in relation to one its cement mixing units. One year later, the company was able to recover 30% of the decline in asset value following an improvement in the unit's productivity. Builders prepares and presents its financial statements in accordance with U.S. GAAP.

In relating to the mixing unit, Builders will *most likely*:

- A. make no further accounting adjustments.
- B. report a gain of \$1,350 in its income statement.
- C. report a gain of \$1,350 in other comprehensive income.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS e

U.S. GAAP does not permit reversals of impairment losses. Therefore, Builders will not make any accounting adjustments to reverse the impairment loss.

61. Cash and cash equivalents are *most likely*:

- A. measured at amortized cost.
- B. classified as marketable securities.
- C. associated with a moderate degree of interest rate risk.

Correct Answer: A

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS d

Cash and cash equivalents are financial assets which are so close to maturity that interest rate risk is minimal (risk that their value will change significantly with changes in interest rates). These assets are classified at either amortized cost or fair value with little difference between the two, in the case of cash and cash equivalents.

62. For the year ended December 31, 2013 Lakner plc reported net income of \$8.5 million and depreciation charges of \$0.9 million. In addition, the company reported a \$0.3 million gain on the retirement of debt. The exhibit below illustrates selective balance sheet information between the financial years 2012 and 2013.

| \$ Millions | 2013 | 2012 | Change |
|------------------------|------|------|--------|
| Accounts payable | 35 | 40 | – 5 |
| Income tax payable | 12 | 10 | + 2 |
| Deferred tax liability | 6 | 10 | – 4 |
| Interest payable | 5 | 8 | – 3 |
| Accounts receivable | 14 | 7 | + 7 |
| Inventory | 9 | 1 | + 8 |
| Cash | 3 | 1 | + 2 |

Which of the adjustments is *most likely* required to reconcile net income with operating cash flow?

- A. Add 20.1.
- B. Subtract 11.9.
- C. Subtract 15.9.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 27, LOS f

To reconcile net income with operating cash flow:

- Depreciation charges are added to net income
- Gain on the retirement of debt is subtracted
- Decrease in deferred income tax liability is subtracted
- Increase in current operating liabilities is added (income tax payable)
- Decrease in current operating liabilities is subtracted (accounts payable and interest payable)
- Increase in current operating assets is subtracted (accounts receivable and inventory)

All figures are in \$ millions

$$\text{Operating cash flow} = 8.5 + 0.9 - 0.3 - 4 + 2 - 5 - 3 - 7 - 8 = -15.9$$

63. Long-term financial liabilities issued at a price differing from par are reported on the balance sheet at an amount equal to their:
- A. fair value.
 - B. face value.
 - C. amortized cost.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS e

Long-term financial liabilities are reported on the balance sheet at an amount equal to their amortized cost. For bonds issued at either a discount or premium, the amortized cost (carrying value) of the bond is equal to their par value at maturity.

64. Allen Luther, a financial analyst, is analyzing the financial statements of Jack & Prime, a newspaper agency. The agency complies with U.S. GAAP. Between 2012 and 2013 the company did not issue any additional debt but repurchased \$5 million shares of common stock. Any other changes in the common stock account were purely due to increase in share market value. He has summarized selective financial information in the exhibit below:

| \$ Millions | 2013 | 2012 |
|-------------------|------|------|
| Long-term debt | 69 | 75 |
| Common stock | 125 | 112 |
| Retained earnings | 42 | 37 |
| Net income | 8 | 6 |

Using the direct method, Jack & Prime's net cash used in financing activities is *closest* to (in millions):

- A. \$9.
- B. \$11.
- C. \$14.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 27, LOS f

All calculations are in \$ millions.

Cash flow from financing activities = cash paid to retire long-term debt + cash paid to retire common stock + cash paid for dividends.

Cash paid to retire long-term debt = $75 - 69 = 6$

Cash paid for dividends = Beginning retained earnings + net income – ending retained earnings

Cash paid for dividends = $37 + 8 - 42 = 3$

Net cash used in financing activities = $6 + 5 + 3 = 14$

Note: Changes in share market values does not constitute a cash outflow or inflow.

65. Rector Associates is a wealth management firm which has recently purchased shares of foreign equity stock for its client portfolios. The shares will be held for an eight-month term after which they will be sold. The primary objective behind the investment is to profit from short-term market fluctuations in the foreign equity market. Six months into the investment, the stock has increased in value by \$5.

With respect to the gain, Rector Associates will *most likely*:

- A. make disclosure in its footnotes.
- B. report it in other comprehensive income.
- C. report it as an unrealized gain in the income statement.

Correct Answer: C

Reference:

CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS e

Rector's equity investment will classify as held for trading. This is because these securities are to be held for a short period of time and were acquired for the purpose of reselling them in the short-term. Rector will record \$5 in its income statement as an unrealized gain.

66. Narcus Limited is a chip manufacturer operating in the U.S. The sales process involves the manufacturer first delivering chips to customers followed by the dispatch of a representative to its customers' respective sites for installation. During the financial year 2013 Narcus sold 3,500 chips at a unit price of \$250; 10% of the units sold are yet to be installed by year end while 5% of the chips were returned due to technical issues.

For the financial year 2013, Narcus will report net revenue of:

- A. \$743,750.
- B. \$831,250.
- C. \$875,000.

Correct Answer: A

Reference:

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

U.S. GAAP requires revenue to be recognized when it is "realized or realizable and earned". This would disallow the practice of recognizing revenue in a period by delivering the product just before the end of the accounting period and completing the sales contract after the period end.

Narcus's sales contract includes the delivery and installation of chips. Therefore, it cannot recognize revenue for those chips which have been delivered but not yet installed. Furthermore, net revenue is a figure calculated after accounting for sales returns and allowances.

$$\begin{aligned}\text{Narcus' net revenue (2013)} &= (3,500 \times \$250) [(1 - (0.10 + 0.05))] \\ &= \$743,750\end{aligned}$$

67. Rex Corp. has reported the following amounts with respect to equity for the financial year 2013:

| | |
|--------------------------------|-----------|
| Beginning shareholder's equity | \$950,270 |
| Net income | 45,040 |
| Dividends paid | 37,370 |
| Shares issued | 256,970 |
| Ending shareholder's equity | 1,534,000 |

The amount that has bypassed the income statement and is classified as other comprehensive income is *closest* to:

- A. \$0.
- B. \$244,350.
- C. \$319,090.

Correct Answer: C

Reference:

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

$$\begin{aligned}\text{Other comprehensive income} &= \$1,534,000 - (\$950,270 + 45,040 - 37,370 + 256,970) \\ &= \$319,090\end{aligned}$$

68. A company reported the following figures in its financial statements for the most recent financial year:

| | |
|-----------------------------|---------------|
| Ending liabilities | \$4.5 million |
| Ending contributed capital | 1.2 million |
| Beginning retained earnings | 1.1 million |
| Net income | 0.9 million |
| Revenue | 3.3 million |
| Distributions to owners | 0.4 million |

The company's total assets at the end of the year are *closest* to:

- A. \$5.7 million.
- B. \$7.3 million.
- C. \$9.7 million.

Correct Answer: B

Reference:

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

Assets = Liabilities + Contributed capital + Ending retained earnings

Ending retained earnings = Beginning retained earnings + Net income –
Dividends

= \$1.1 million + \$0.9 million – \$0.4 million

= \$1.6 million

Assets = \$4.5 million + \$1.2 million + \$1.6 million = \$7.3 million

Questions 69 to 76 relate to Corporate Finance

69. Land Solutions (LS) specializes in the manufacture of cultivators used for agricultural purposes. This year LS manufactured 34,000 units at a sales price of \$2,000. Variable costs per unit were \$1,050 and fixed costs totaled \$12 million. Total fixed financing expenses amount to \$2 million.

LS's revenue at its operating breakeven is *closest* to:

- A. \$21,052,631.
- B. \$25,262,000.
- C. \$68,000,000.

Correct Answer: B

Reference:

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

$$\text{Operating breakeven quantity} = \frac{F}{P-V} = \frac{\$12,000,000}{\$2,000 - \$1,050} = 12,631$$

$$\text{Revenue at operating breakeven} = 12,631 \times \$2,000 = \$25,262,000$$

70. Which of the following dividend policies should *most likely* have an economic effect on a shareholder's total cost basis?
- A. Cash dividends
 - B. Stock dividends
 - C. Reverse stock split

Correct Answer: A

Reference:

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

Cash dividends reduce shareholder's equity by reducing retained earnings. Stock dividends have no economic impact on shareholder's equity; the total cost basis remains the same as investors receive more shares with a lower cost per share.

Reverse stock splits increase the share price and reduce the number of shares outstanding having no impact on the market value or total cost basis of shareholder's equity.

71. Thirty days have passed since a company invested in a 150-day Treasury security with a par value and face value of \$1,000.00 and 969.31, respectively.

The bond-equivalent yield of the Treasury security is *closest* to:

- A. 8.93%.
- B. 9.18%.
- C. 9.63%.

Correct Answer: C

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 39, LOS e

$$\begin{aligned}\text{Bond equivalent yield} &= \left(\frac{\text{Face value} - \text{Purchase price}}{\text{Purchase price}} \right) \left(\frac{365}{\text{Number of days to maturity}} \right) \\ &= \left(\frac{\$1,000.00 - \$969.31}{\$969.31} \right) \left(\frac{365}{150 - 30} \right) \\ &= 9.63\%\end{aligned}$$

72. A company has announced an annual dividend per share of Brazilian Leros (BRL) 2, which will be payable on a quarterly basis, on January 28. The stock price at the time of the announcement is BRL 40. Company management has calculated that the share will first trade at an ex-dividend price of BRL 38 on January 30, which is a business day. Shareholders will be entitled the right to receive dividends on Sunday, February 1. Payment of dividends will occur on February 15, which happens to be the first national holiday of the year.

Which of the following dates is *most likely* inconsistent with the dividends payment chronology?

- A. January 30
- B. February 1
- C. February 15

Correct Answer: B

Reference:

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

The holder of record date typically occurs two business days after the ex-dividend date. The holder of record date is the date shareholders listed in the corporation's records will be deemed to have ownership of the shares for the purposes of receiving the upcoming dividend. Although February 1 falls two days after the ex-dividend date (January 30), the holder of record date should have been fixed at the next business day, February 3.

Unlike the holder-of-record and ex-dividend dates, which can only occur on business days, the payment date can occur on a weekend or holiday.

73. Cash dividends and repurchases are economically equivalent when:
- A. earnings yield and after-tax cost of borrowing are equal.
 - B. the market price per share is equal to the book value per share.
 - C. the information content and taxation of cash dividends and share repurchases are the same.

Correct Answer: C

Reference:

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

Cash dividends and share repurchases are economically equivalent when the information content and taxation of both are the same.

The equivalence of earnings yield and after-tax cost of borrowing implies that the share repurchase has no impact on EPS. However, it does not necessarily imply that cash dividends and share repurchases are economically equivalent.

74. The exhibit below summarizes key financial results for Krayack Limited, a steel processor, between the years 2012 and 2013.

Exhibit:
Key Financial Results for Krayack Limited

| \$ Millions (where applicable) | 2013 | 2012 |
|--------------------------------|---------|---------|
| Credit sales | 100 | 150 |
| Cost of goods sold | 65 | 50 |
| Accounts receivable | 50 | 70 |
| Inventory | 40 | 25 |
| Cash and marketable securities | 15 | 10 |
| Net operating cycle | 65 days | 83 days |

Between 2012 and 2013, Krayack Limited's day's payables outstanding has *most likely*:

- A. increased.
- B. decreased.
- C. remained constant.

Correct Answer: A

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 39, LOS f

The day's payables outstanding has increased.

To determine day's payables outstanding, the formula for net operating cycle is used:

Net operating cycle = Number of days of receivables + Number of days of inventory – Number of days of payables.

Number of days of payables (2013):

65 days = $[50 \div (100/365)] + [40 \div (65/365)] - \text{Number of days of payables}$
 Number of days of payables = 342

Number of days payables (2012):

83 days = $[70 \div (150/365)] + [25 \div (50/365)] - \text{Number of days of payables}$

Number of days of payables = 270

75. Which of the following practices is *least* consistent with strong corporate governance?
- A. Board members are held accountable for any decisions taken on advice provided by external consultants.
 - B. Board members of a manufacturing firm occasionally receive remuneration for providing investment advice.
 - C. Allocating the position of board chair and chief executive officer to one executive board member while appointing an objective individual as lead independent director.

Correct Answer: B

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 40, LOS c & d

Although best practices dictate that the position of chair and CEO should be held by two separate individuals, the positions can be held by one individual if the company appoints a lead independent director based on his or her objectivity.

It is important that board members are held accountable for any decisions taken by advice provided by external consultants.

The company's ethical code or board procedures should limit circumstances in which board members can accept remuneration or in-kind benefits from the company for consulting or other services provided outside the scope of their position as board members. As directors of a manufacturing firm, providing investment advice is clearly outside the scope of their relationship.

76. A company's executive is in the process of selecting a liquidity source that can be used without affecting the normal operations of a company. The executive will *most likely*:
- A. utilize the cash in the company's bank account.
 - B. negotiate a debt contract on behalf of the firm.
 - C. file for bankruptcy protection and reorganization.

Correct Answer: A

Reference:

CFA Level I, Volume 4, Study Session 11, Reading 39, LOS a

Primary sources of liquidity such as cash in bank accounts represent readily accessible resources whose use is not likely to affect the normal operations of the company.

On the other hand, the use of secondary sources may result in a change in the company's financial and operating position; these include negotiated debt contracts and filing for bankruptcy protection and reorganization.

Questions 77 to 88 relate to Equity Investments

77. Jesse Mackintosh is constructing a portfolio that will be benchmarked to a market-capitalization-weighted equity index. He is in the process of calculating the index's total return for the most recent period. Mackintosh has collected the necessary data for the calculation in an exhibit.

Exhibit:
Index Price and Income Return Data

| Security | Beginning of market cap | End of period market cap | Total Dividends | Beginning of Period Weight (%) |
|----------|-------------------------|--------------------------|-----------------|--------------------------------|
| A | 56,500 | 53,000 | 500 | 49.3 |
| B | 37,500 | 40,000 | 0 | 32.8 |
| C | 20,500 | 37,000 | 100 | 17.9 |
| Total | 114,500 | 130,000 | | 100.0 |

The total return on the index is *closest* to:

- A. 6.67%.
- B. 14.06%.
- C. 22.93%.

Correct Answer: B

Reference:

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

$$\begin{aligned}
 \text{Total return} &= [(53.0 - 56.5 + 0.5)/56.5][0.493] + [(40 - 37.5)/37.5][0.328] + \\
 &\quad [(37.0 - 20.5 + 0.1)/20.5][0.179] \\
 &= 14.06\%
 \end{aligned}$$

78. Which of the following statements accurately compares market-capitalization (cap)-weighted with price-weighted indexes (which are identical in all respects)?
- A. Market-cap-weighted indexes are most sensitive to the effects of reconstitution.
 - B. Reconstitution affects market-cap- and price-weighted indexes in a similar manner.
 - C. The value of price-weighted indexes may depart from a market-cap-weighted index due to rebalancing.

Correct Answer: A

Reference:

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

Reconstitution creates turnover particularly in market-cap-weighted indexes. When one security is removed and another is added, the index provider has to change the weights of all other securities in order to maintain the market-capitalization weighting of the index.

Price-weighted indexes are not rebalanced because the weight of each constituent security is determined by its price. Rebalancing is less of a concern for market-cap-weighted index providers because they largely rebalance themselves.

79. Which of the following voting mechanisms is *most likely* used to meet the interests of shareholders who own a small number of shares?
- A. Proxy
 - B. Statutory
 - C. Cumulative

Correct Answer: C

Reference:

CFA Level I, Volume 5, Study Session 14, Reading 48, LOS b

In order to meet the voting interests of shareholders with limited share ownership, cumulative voting is often used. This voting mechanism allows shareholders to direct their total voting rights to a specific candidate, providing them with a higher level of representation on the board than would be allowed under statutory voting. In case of the latter, each share only represents one vote.

Proxy voting provides shareholders with the convenience of casting their votes without the need to attend board meetings.

80. A trader serving a securities trading firm has purchased a stock priced at \$80 on margin using 40% equity. The maintenance requirement for the position is 25%.

The trader will receive a margin call if the stock price:

- A. falls below \$20.
- B. falls below \$64.
- C. rises above \$80.

Correct Answer: B

Reference:

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

Initial equity is \$32 per share ($\$80 \times 40\%$). Subsequent changes in equity per share are equal to the sum of the initial equity per share plus change in share price, $\$32 + (P - \$80)$. The margin call will take place if equity drops below the 25% maintenance margin requirement.

The following equation is used to determine the price below which a margin call will be received.

$$(\$32 + P - 80)/P = 25\%$$

$$P = \$64$$

If the price drops below \$64, the trader will receive a margin call.

81. Donald Grant is a junior market analyst writing a report on the role of dealers and arbitrageurs in equity markets. He discusses the role of both parties in providing liquidity to markets with his senior editor,

Statement: “While dealers typically provide liquidity to buyers and sellers in equity markets, arbitrageurs do not; the latter are primarily concerned with exploiting any security misvaluations.”

Grant is *most likely* correct with respect to the role of:

- A. dealers only.
- B. arbitrageurs only.
- C. both dealers and arbitrageurs.

Correct Answer: A

Reference:

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

Grant is only correct with respect to the role of dealers who provide liquidity to buyers and sellers arriving at the same market at different times. On the other hand, arbitrageurs sell to buyers in one market and buy from sellers in other markets thus providing liquidity at the same time.

82. A British investor is expecting to receive \$10 million in three month’s time and would like to hedge against an unfavorable movement in the US dollar (USD). He purchases USD denominated put options with a strike price of 1.55, paying a premium of 0.30. The current GBP/USD spot exchange rate is 1.66.

The investor will exercise the put option if the spot exchange rate:

- A. rises above 1.55.
- B. declines below 1.25.
- C. declines below 1.55.

Correct Answer: C

Reference:

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

Since the investor is expected to receive USD, he is long the dollar and is concerned that the GBP/USD may depreciate lowering the value of his proceeds. Therefore, he has purchased a put option which will only be exercised if the GBP/USD spot rate declines below the option strike price (1.55).

83. A major use of a market index is that it:
- A. can be used for modeling unsystematic risk.
 - B. accurately reflects the overall attitudes of investors in a market.
 - C. it can serve as a market proxy when measuring risk-adjusted performance.

Correct Answer: C

Reference:

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

Market indexes can be used to gauge investor confidence or market sentiment. However it may not represent an accurate measure of overall investor attitude or market sentiment because an index comprises only a sample of stocks traded in the market.

A security market index can be used to represent the market portfolio in CAPM, measuring and modeling systematic risk and market returns.

84. Mark Patel and Eliza Butler are equity investors seeking to purchase a manufacturer's share of stock currently trading at \$43. They place the orders with their respective brokers who issue the following instructions on behalf of the two individuals:

Patel - "This order should be executed at the best price available but by no means can a price higher than \$50 be accepted."

Butler - "Any shares received should automatically be transferred by us, the brokerage firm, to Butler's security account."

The instructions issued on behalf of the clients can be respectively classified as:

| | Patel | Butler |
|----|-----------|------------|
| A. | Execution | validity. |
| B. | Validity | execution. |
| C. | Execution | clearing. |

Correct Answer: C

Reference:

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

The instructions issued on behalf of Patel are classified as execution, which indicate how to fill an order. The order issued by the broker is a limit buy order (placing a limit of \$50 on the purchase price). Limit orders convey execution instructions.

The instructions issued on behalf of Butler are classified as clearing, which indicate how to arrange the final settlement of the trade.

85. An investor is evaluating the degree of regulation in a country's financial markets. Which of the following factors is a sign of high degree of market regulation?
- A. Pension funds are required to maintain adequate reserves to ensure future liabilities can be funded.
 - B. Allowing diversity in accounting standards to ensure a wide range of reporting situations are adequately addressed.
 - C. Private financial companies are exempt from minimum capital requirement regulations in an effort to promote corporate growth.

Correct Answer: A

Reference:

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

By requiring pension funds to maintain adequate reserves, regulators aim to ensure that they will be able to fund their liabilities.

In the absence of common reporting standards investors may refuse to invest in companies that do not report to a common reporting standard. Common reporting standards ease comparability amongst companies.

Similarly requiring financial companies to maintain minimum levels of capital ensures companies will be able to meet their contractual commitments when unexpected market declines or poor decisions cause them to lose money. Secondly, they ensure that owners of financial firms have substantial interests in the decisions they make.

86. The exhibit below illustrates the share price and earnings per share (EPS) for three companies (Tecra, Cosmos, and Latle) in the technology sector for the most recent financial year (2013).

Exhibit:

Price and EPS Data for Tecra, Cosmos & Latle for the Financial Year 2013

| £ | Tecra | Cosmos | Latle |
|-----------------|-------|--------|-------|
| Price per share | 782.5 | 560.2 | 430.6 |
| EPS | 446.1 | 450.1 | 220.5 |

Using the method of comparables, which of the following companies appears to be the *most* undervalued?

- A. Tecra
- B. Cosmos
- C. Latle

Correct Answer: B

Reference:

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

Cosmos appears to be the most undervalued based on P/E multiples.

Using the method of comparables, the P/E ratio for the three companies is as follows:

$$\text{Tecra} = 782.5/446.1 = 1.7541$$

$$\text{Cosmos} = 560.2/450.1 = 1.245$$

$$\text{Latle} = 430.6/220.5 = 1.953$$

87. The performance of commodity indices:
- A. reflects the risk-free interest rate.
 - B. is affected solely by changes in commodity prices.
 - C. is identical to the performance of underlying commodities.

Correct Answer: A

Reference:

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

The performance of commodity indices can be quite different from the performance of their underlying commodities because indices consist of futures contracts on the commodities rather than the actual commodities. Index returns reflect the risk-free rate, the changes in futures prices and the roll yield.

88. During the year 2010, an index portfolio benchmarked to a newly formed equity index generated a total capital gain of \$125 while cumulative dividend generated by index securities amounted to \$50. The total price of the constituent securities at the end of the period was \$1,250.

The total return of the index portfolio is *closest* to:

- A. 14.00%.
- B. 14.58%.
- C. 15.56%.

Correct Answer: C

Reference:

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

Total return = (Capital appreciation + dividend income)/Price of the index at the beginning of the period

$$\begin{aligned}\text{Total return} &= (\$125 + \$50) \div (\$1,250 - \$125^*) \\ &= 15.56\%\end{aligned}$$

*The index appreciated by \$125 from its level at the beginning of the period. Removing the capital appreciation amount will generate the index price level at the beginning of the period.

Questions 89 to 94 relate to Derivatives

89. An American style put option on a bond expires in 80 days and has an exercise price of \$0.90 per \$1 of par. The bond is currently worth \$1.20 per \$1 par and makes no cash payments during the life of the option. The risk-free rate of interest is 3.5% and the notional principal of the contract is \$1,000. The bond is expected to be worth \$1.40 per \$1 par at option expiration.

The highest and lowest possible prices (per \$1 par value) for the put option are respectively *closest* to:

| | Highest price | Lowest price |
|----|---------------|--------------|
| | (\$): | (\$): |
| A. | 0.89 | 0.20. |
| B. | 0.90 | 0.00. |
| C. | 1.40 | 1.20. |

Correct Answer: B

Reference:

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

The maximum value of an American put is the exercise price, \$0.90 per 1 par value while the minimum value of any option is 0.

90. Which of the following statements *most* accurately illustrates a consequence of arbitrage?
- A. Short selling becomes restrictive.
 - B. The same good can sell for different prices in different markets in the future.
 - C. The combined actions of traders would force the convergence of trading prices.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 17, Reading 57, LOS e

The principles of arbitrage are based on the law of one price. This implies that the same good cannot sell for different prices in different markets once the forces of arbitrage hold. This is because the combined actions of traders will push down the higher price and up the lower prices up resulting in convergence of trading prices.

In order for arbitrage to be possible, traders should be able to sell and buy assets without any restrictions.

91. Derivatives *most likely*:

- A. include mutual funds.
- B. trade in spot and over-the-counter markets.
- C. have a definite life span similar to insurance contracts.

Correct Answer: C

Reference:

CFA Level 1, Volume 6, Study Session 17, Reading 57, LOS a

Similar to insurance, derivative contracts have a definite life span and maturity date.

Derivatives derive their value from underlying assets by transforming their performances before paying them out in derivatives transactions while mutual funds simply pass on the net returns of their underlying securities. Therefore, derivatives are not used to describe mutual funds.

92. The exhibit below illustrates details concerning otherwise identical call and put options on a U.S. small-cap stock.

Exhibit:
Details Concerning Call and Put on US Small-Cap Stock

| | Call: | Put: |
|---|----------|----------|
| Time to expiration (days) | 120 | 120 |
| Exercise price (\$) | 85 | 85 |
| Option price (\$) | 14 | 9 |
| Volatility (Annual standard deviation, %) | 14 | 12 |
| Type of option | American | American |
| Risk-free rate | 5.50% | |

Holding all else constant, which of the following changes will increase the value of the option in question?

- A. Decreasing the volatility of the call option.
- B. Decreasing the exercise price of the put option.
- C. Increasing the time to expiration of the put option.

Correct Answer: C

Reference:

CFA Level I, Volume 6, Study Session 17, Reading 58, LOS o

Increasing a put option's time to expiration will be beneficial to the holder of an American put option as the option can always be exercised; thus, there is no opportunity cost associated with waiting for option exercise. Therefore, a longer-term put will be at least as expensive relative to its shorter-term counterpart.

The value of an American put with a higher exercise price must be at least as great as the value of an American put with a lower exercise price. Therefore, increasing the exercise price will increase the value of the put option.

Higher (lower) volatility will increase (decrease) the value of call options.

93. Which of the following factors *most likely* differentiate American call prices from European call prices? .
- A. volatility
 - B. right to exercise early
 - C. cash flows of the underlying

Correct Answer: C

Reference:

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

Option C is correct.

American call prices can differ from European call prices only if there are cash flows on the underlying, such as dividends or interest.

American put prices can differ from European put prices, because the right to exercise early always has value for a put.

94. An analyst has gathered the following data for an underlying stock selling for \$146.

| Exercise Price | Call price | Put Price |
|----------------|------------|-----------|
| \$150 | \$7.50 | \$8.20 |

The breakeven price for the put option buyer is *closest* to:

- A. 136.80
- B. 141.80
- C. 158.20

Correct Answer: B

Reference:

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

Breakeven point for put option buyer = $S_T = X - P_O = 150 - 8.2 = 141.8$.

Questions 95 to 106 relate to Fixed Income

95. The spread measure which accounts for future interest rate volatility is the:

- A. Z-spread.
- B. G-spread.
- C. option-adjusted spread.

Correct Answer: C

Reference:

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

The option-adjusted spread accounts for future interest rate volatility.

96. Each bond comprising the par curve:

- A. is priced at par value.
- B. is a zero-coupon issue.
- C. has a full price equal to par value between coupon payment dates.

Correct Answer: A

Reference:

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

A par curve is a sequence of maturities such that each bond is priced at par value.

Bonds comprising the par curve are coupon paying bonds.

Between coupon payment dates, the flat price (not the full price) is assumed to be equal to par value.

97. A decline in the effective duration of a callable bond *most likely* implies that a bond's:

- A. yield-to-worst has risen.
- B. yield-to-maturity has risen.
- C. benchmark yield curve has shifted upwards.

Correct Answer: C

Reference:

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

Effective duration measures interest rate risk in terms of a change in the benchmark yield curve.

Therefore a decline in effective duration could be triggered by an upward shift in the benchmark yield curve.

The duration of a callable bond is not the sensitivity of a bond's price to a change in the yield-to-worst. Modified duration is a yield duration statistic measuring interest rate risk in terms of a bond's own yield-to-maturity.

98. A 5%-annual coupon paying bond issue has a term to maturity of six years. The bond's par value is \$1,000 and is trading at a yield to maturity of 7%.

The bond is *most likely* trading at:

- A. par.
- B. a discount to par.
- C. a premium to par.

Correct Answer: B

Reference:

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

To determine the bond's price, the present value of the bond needs to be determined. Using the present value functions on the financial calculator, the present value is determined as follows:

$$FV = 1,000$$

$$PMT = 50$$

$$I/Y = 7\%$$

$$N = 6$$

$$PV = -904.669$$

The bond is said to be trading at 90.47 ($904.669/1,000 \times 100$) of its par value or at a discount to par.

99. A one-year zero coupon bond issue was purchased at a price of \$850. The principal value of the bond is \$1,000.

The zero-coupon bond:

- A. will be redeemed at \$850.
- B. will pay a fixed rate of interest.
- C. has an implied interest of \$150.

Correct Answer: C

Reference:

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

The zero-coupon bond has an implied interest of \$150 ($\$1,000 - \850).

Zero-coupon bonds do not make periodic coupon payments and are redeemed at par.

100. An increase in market interest rates will *most likely* benefit the holder of a:
- A. call option.
 - B. put option.
 - C. conversion option.

Correct Answer: B

Reference:

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

An increase in market interest rates will benefit a put option holder. The option holder will exercise his/her right to sell the bond back to the issuer and receive cash proceeds; these proceeds can then be re-invested at higher market interest rates.

A decrease in market interest rates will benefit a call option holder who can exercise the option, redeem the callable bond and issue a new bond at the lower market interest rate.

The value of the conversion option to the holder depends on how the issuer company's stock price changes relative to the exercise price of the conversion option.

101. A company has purchased a bond at a price of \$956. The par value of the bond is \$1,000 and the original term to maturity is five years. The applicable capital gains tax rate is 25%.

Based on the information provided on the bond issue, the company:

- A. will not need to pay any capital gains taxes on the maturity of the bond issue.
- B. will need to declare capital gains of \$44 at the maturity of the bond issue only.
- C. will need to include \$8.8 in taxable income every tax year for 5 years and declare a capital gain of \$44 at maturity.

Correct Answer: A

Reference:

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

A prorated portion of the \$44 (\$1,000 – \$956) original issue discount is included in taxable income every year until maturity; this amounts to $\$44/5 = \8.8 . The original issue discount will allow the investor to increase their cost basis in the bonds so they do not face any capital gains or losses at maturity.

102. The interest income generated by a municipal bond issued in the United States is *most likely*:

- A. exempt from federal income tax and from the income tax of the state in which the bonds are issued.
- B. taxed at the income tax of the state in which the bonds are issued but exempt from federal income tax.
- C. taxed at the federal income tax rate but exempt from the income tax of the state in which the bonds are issued.

Correct Answer: A

Reference:

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

The interest income generated by a municipal bond issued in the United States is often exempt from federal income tax and from the income tax of the state in which the bonds are issued.

6. A corporation has issued a convertible bond at 90 of par. The principal amount of the issue is \$1,000. The issue is convertible into the issuer's common shares at a price of \$120 per share.

103. The number of common shares per bond is *closest* to:

- A. 8.
- B. 18.
- C. 20.

Correct Answer: A

Reference:

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

Number of common shares per bond = $\$1,000 / \$120 = 8$

Number of common shares per bond (Conversion ratio) = Par value/conversion price

Conversion price = Price per share at which the convertible bond can be converted into shares

104. Which of the following factors *least likely* distinguishes investment-grade from high-yield bond issues?

- A. Liquidity
- B. Coupon rate
- C. Credit quality

Correct Answer: B

Reference:

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

In the global bond market, investment-grade bond markets tend to be more liquid than high-yield bond markets.

Investment-grade bond issues are perceived to have higher credit quality relative to high-yield issues.

105. The settlement date of which of the following bonds occurs the day following the transaction date?

- A. Eurobonds
- B. Corporate bonds
- C. Quasi-government bonds

Correct Answer: C

Reference:

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

In the case of quasi-government and government bonds settlement takes place one day after the transaction date.

In the case of corporate bonds, settlement occurs three days following the transaction date.

106. An analyst is comparing two corporate bond issues, X and Y. He has compiled statistics for the two bonds (Exhibit). The analyst would like to determine which bond offers a higher yield-to-maturity when the yields are stated on a monthly bond basis.

Exhibit:
Statistics for Bond X and Y

| | X | Y |
|--------------------------|-----------|---------|
| Annual coupon rate | 5.00% | 8.00% |
| Coupon payment frequency | Quarterly | Monthly |
| Yield-to-maturity | 5.67% | 6.15% |

Believing that Bond Y is riskier than X, the analyst will *most likely* conclude that the additional compensation offered by the former is *closest* to:

- A. 47.0 bps.
- B. 50.7 bps.
- C. 51.2 bps.

Correct Answer: B

Reference:

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

5.67% for a periodicity of four converts to 5.64% for a periodicity of twelve.

$$\left(1 + \frac{0.0567}{4}\right)^4 = \left(1 + \frac{ARM_{12}}{12}\right)^{12}, \text{APR}_{12} = 0.05643$$

The additional compensation for greater risk in Bond Y is 50.7 basis points (0.0615 – 0.05643) when both are annualized for monthly compounding.

Questions 107 to 112 relate to Alternative Investments

107. Which of the following is *not* the characteristic of hedge fund?

Hedge funds:

- A. impose restrictions on redemptions.
- B. are primarily used to provide diversification benefits for the portfolio.
- C. are generally set up as private investment partnership open to a limited number of investors willing and able to make a large initial investment.

Correct Answer: B

Reference:

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

Both options A and C are the characteristics of hedge funds. However option B is incorrect because the hedge funds have goal of generating high returns, either in an absolute sense or over a specified market benchmark.

108. In which of the following private equity strategy, the current management team is being replaced and the acquiring team is involved in managing the company?

- A. Venture capital
- B. Management buy-ins.
- C. Management buyouts.

Correct Answer: B

Reference:

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

There are two specific types of leveraged buyouts (LBOs):

1. Management buyouts: (the current team is involved in acquisition)
2. Management buy-ins: (the current management team is being replaced and the acquiring team is involved in managing the company)

109. Which of the following is *least likely* an income based approach to appraisal for an income producing property?
- A. Comparable sales approach
 - B. Direct capitalization approach
 - C. Discounted cash flow approach

Correct Answer: A

Reference:

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

Direct capitalization and discounted cash flow approaches are two income based approaches to appraisal for an income-producing property.

110. Which of the following sources of venture capital (VC) financing can be used to support a major marketing campaign of a company that has recently initiated commercial production and sales?
- A. Seed-stage financing.
 - B. Later stage financing.
 - C. Formative stage financing.

Correct Answer: B

Reference:

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

Later stage financing is usually provided to companies who have already initiated commercial production and need financing to support a major market campaign.

111. Luna Babbage is an investor who has invested \$150,000 each in the hedge funds ART and EDD at the beginning of the calendar year. Both funds have a “2 and 10” fee structure with management and incentive fees being paid at the end of the year. For both funds, the incentive fee is calculated based on returns in excess of a 6% hurdle rate. At the end of the calendar year the value of ART appreciates by 10% while EDD depreciates by 4%.

The incentive fee paid to the management of ART is *closest* to:

- A. \$270.
- B. \$600.
- C. \$3,300.

Correct Answer: A

Reference:

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

ART End of year capital: $\$150,000 \times 1.10 = \$165,000$

ART Management fees: $\$165,000 \times 0.02 = \$3,300$

Hurdle amount (ART & EDD): $\$150,000 \times 0.06 = \$9,000$

Incentive fee (ART) = $(\$165,000 - \$150,000 - \$3,300 - \$9,000) \times 10\% = \$270$

112. In contrast to traditional investments, alternative investments are characterized by:
- A. high absolute returns.
 - B. low degree of leverage.
 - C. potential tax disadvantages.

Correct Answer: A

Reference:

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

In contrast to traditional investments, alternative investments are characterized by potential tax disadvantages, high expected (absolute) returns and high degree of leverage.

Questions 113 to 120 relate to Portfolio Management

113. An investor currently owns a portfolio with expected annual return and standard deviation of 12% and 18% respectively. The investor is considering adding a new stock in his current portfolio. The standard deviation of the stock is 22% and its correlation with the current portfolio is 0.35.

Considering 5% risk free rate, the risk adjusted return of the stock from adding to the investor's current portfolio is *closest* to:

- A. 7.99%
- B. 12.15%
- C. 25.67%

Correct Answer: A

Reference:

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

$$\text{Risk Adjusted Return} = 0.05 + [0.22(0.35)/0.18] \times [0.12 - 0.05] = 7.99\%$$

114. A portfolio consists of 30 assets with the correlation being 0.75 among all pairs of assets. The portfolio variance is 0.0625. The risk of such a portfolio will be *closest* to:

- A. 4.84%.
- B. 15.63%.
- C. 22.62%.

Correct Answer: C

Reference:

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

$$\text{Portfolio risk: } \sqrt{0.0675/30 + [(30 - 1)/30]0.75(0.0675)} = 22.62\%$$

115. A public investor with an asset base of US\$50,000 should *most likely* opt for a (n):

- A. hedge fund.
- B. exchange traded fund.
- C. separately managed account.

Correct Answer: B

Reference:

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

Investors with small asset bases should opt for an exchange traded funds which are open to the general public. In order to qualify for an exemption from statutory reporting requirements, hedge funds cannot be offered for sale to the general public; this is why the investor base of this pooled vehicle differs from mutual fund. Separately managed accounts usually require a minimum investment between US\$100,000 and US\$500,000.

116. A portfolio manager forms an investment portfolio with two asset classes, 1 and 2, held in the proportions 60% and 40% respectively. The expected annual returns and standard deviations of the asset classes are summarized in the exhibit below.

Exhibit:

Expected Annual Standard Deviations and Returns of a Two-Asset Portfolio

| Asset Class | Expected Annual Return (%) | Expected Annual Standard Deviation (%) |
|-------------|----------------------------|--|
| 1 | 13.5 | 15.2 |
| 2 | 20.8 | 24.0 |

If the portfolio standard deviation is 14.5%, the correlation between the two asset classes should be *closest* to:

- A. 0.20.
- B. 0.73.
- C. 1.00.

Correct Answer: A

Reference:

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

$$\sigma_p^2 = \sigma_1^2 w_1^2 + \sigma_2^2 w_2^2 + 2\sigma_1\sigma_2 w_1 w_2 p_{1,2}$$

$$0.145^2 = (0.152)^2(0.6)^2 + (0.24)^2(0.4)^2 + 2(0.152)(0.24)(0.6)(0.4)p_{1,2}$$

$$p_{1,2} = 0.199399 \text{ or } 0.20$$

117. One difference between a defined contribution (DC) and defined benefit (DB) plan is that in the case of the latter:
- A. future benefits are undefined.
 - B. investment risk exposure is low.
 - C. employees are required to contribute a portion of their wages each period.

Correct Answer: B

Reference:

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

With respect to DB plans investment risk exposure is minimal. This is because the responsibility for ensuring that assets invested are sufficient to generate the promised payments upon employee retirement falls on the employer. However in the case of DC plans, the responsibility for ensuring that enough funds are available to meet employee retirement needs lies on the employee itself.

Future benefits are predefined in the case of DB plans.

Employees will need to contribute a portion of their wages each period in the case of DC plans.

118. What are the implications for investors using the Markowitz efficient frontier for making investment decisions?
- A. The slope of the efficient frontier is concave.
 - B. Investors are rewarded with increasing increase in returns for assuming more risk.
 - C. Portfolios to the right of the global minimum variance portfolio are the most efficient.

Correct Answer: A

*Reference:**CFA Level 1, Volume 1, Study Session 12, Reading 42, LOS g*

The Markowitz efficient frontier contains all the risky assets that rational, risk-averse investors will choose. The slope of the minimum variance frontier is concave which implies that investors seeking portfolios above the global minimum variance portfolio obtain decreasing increases in returns as they assume more risk. Portfolios to the left of the global minimum variance portfolio (located along the efficient frontier) are the most efficient. In other words, portfolios falling to the right of the minimum-variance frontier give a lower return for the same level of risk, which is undesirable.

119. Which investor category is typically associated with high liquidity needs?
- A. Banks
 - B. Foundations
 - C. Individual Investors

Correct Answer: A*Reference:**CFA Level 1, Volume 1, Study Session 12, Reading 41, LOS b*

Banks have high liquidity needs to meet repayment of deposits. The liquidity needs of foundations are typically low while needs vary for individual investors.

120. An investor has purchased shares of a large-cap equity stock. The covariance of the stock with the market index is 0.0320 while standard deviation of the stock and the market index is 22.5% and 15.7% respectively.

The return of the large-cap equity stock *most likely* follows a trend which:

- A. follows the general market.
- B. resembles the general market.
- C. moves opposite to the general market.

Correct Answer: A

Reference:

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

The beta of the equity stock is + 1.30 $[0.0320/(0.157^2)]$. A positive beta indicates that the return of the equity stock follows the general market trend.