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CFA Level I 3rd Mock Exam
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Revision 1

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

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Questions 1 to 18 relate to Ethics

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

   A. request for a different assignment.
   B. report the violation to her supervisor.
   C. report the violation to regulatory authorities.

   Correct Answer: B

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

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

2. The CFA Institute Code of Ethics requires members and candidates to:

   A. encourage others to practice in a professional and ethical manner that will reflect credit on the profession.
   B. ensure the preservation of capital market integrity is given priority over protecting employer interests.
   C. use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities.

   Correct Answer: A

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

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

3. Adequate compliance procedures should:

   A. meet regulatory requirements.
   B. ensure supervisors do not delegate their duties.
   C. be designed to anticipate every potential violation.

Correct Answer: A

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

Adequate compliance procedures should meet regulatory requirements.
The standard concerning responsibility of supervisors permits individuals to delegate their supervisory duties but such delegation does not relieve them of their responsibility.
However, procedures cannot be designed to anticipate every potential violation which is why such a requirement is not imposed by the Code and Standards.

4. Upon reviewing the materials received during the investigation of a professional conduct inquiry, a designated officer's preliminary course of action would be to:

   A. revoke the member's CFA charter.
   B. suspend the member's membership.
   C. propose a sanction which can be rejected by the member.

Correct Answer: C

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

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

5. Recommended written trade allocation procedures *least likely* include:

   A. processing orders on a first-come, first-served basis.
   B. allocating trades for new issues by portfolio manager.
   C. giving all accounts participating in a block trade a weighted price based on their order value.

   Correct Answer: A

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

   Procedures for allocating trades to clients include:

   - processing and executing orders on a first-in, first out basis;
   - allocating trades for new issues by allocating securities by client rather than portfolio manager; and
   - giving all accounts participating in a block trade the same execution price.

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

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

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

Correct Answer: B

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

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

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

7. Ace Associates is a hedge fund management firm generating above-average fund performance for the past several years. The fund's senior manager, Grace Singh, is contacted by Jeremy Lewis, a self-employed portfolio manager, who is seeking to allocate hedge funds to his client accounts. Lewis's client base ranges from those with imminent liquidity needs to wealthy entrepreneurs with insignificant portfolio funding requirements. Singh signs an agreement with Lewis whereby Ace's management fee will be reduced for his clients in exchange for the management of her personal account. Lewis does not disclose the arrangement to his clients because they are expected to benefit.

   Which of the following Standards of Professional Conduct is *least likely* being violated?

   A. Suitability
   B. Referral fees
   C. Misrepresentation

Correct Answer: C

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

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

Lewis is in violation of the standard relating to suitability by allocating an illiquid asset class (hedge funds) to the accounts of clients with imminent liquidity needs.

By not disclosing details of the arrangement between Lewis and Singh (charging lower fees in exchange for portfolio management services), the portfolio manager is in violation of the standard relating to referral fees. This standard requires members and candidates to disclose any compensation, benefit or consideration received from or paid to others for the recommendation of products and services.

8. Paul Murray is preparing a report on the stock of a credit rating agency with two other research analysts. Based on his independent discussion with the agency's executives as well as study of economic reports and surveys, Murray forecasts the agency's client base to shrink and deems a 'sell' rating as appropriate. However, his colleagues disagree stating that Murray's recommendation is too extreme and that a 'hold' rating is more appropriate based on their in-depth historical industry analysis of the impact of a shrinking client base on corporate performance.

   In order to comply with the CFA Institute Standards of Professional Conduct, Murray's *best* course of action is to:

   A. continue to identify his name with the research report.
   B. request for the removal of his name from the research report.
   C. not issue the report with his recommendation as it is based on material nonpublic information.

   Correct Answer: A

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

Murray’s best course of action is to continue to have his name identified with the report. This is because the recommendation derived from his colleagues has a reasonable and adequate basis and he has no reason to doubt its independence and objectivity. Therefore, he does not need to disassociate himself from the report.

Murray’s recommendation is based on the mosaic theory. He is using nonmaterial nonpublic information along with information from public sources to derive his recommendation.

9. Jason Briggs is a portfolio manager serving Alliance. Based on a consultant research analyst report Briggs will be undertaking a block trade for thirty client accounts by purchasing a pharmaceutical corporate bond issue. The company is categorized as highly risky with potential for strong returns. Using the firm’s broker, shares of stock are allocated to each client’s account based on current market price with commission being charged in proportion to account size. Martha Lake is one of Briggs’ clients. The manager has decided to exclude her account from the trade allocation. During a discussion with Briggs she states, “As a child I had seen my parents undergo many financial hardships and so I am somewhat apprehensive towards uncertain situations.”

Two months later, the pharmaceutical’s credit rating has improved. However, Briggs deems the issue as still being risky for Lake and does not inform Lake of the rating change.

Which of the following CFA Institute Standards of Professional Conduct are *most likely* being violated?

A. Suitability
B. Fair dealing
C. Communication with clients and prospects

Correct Answer: B

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

Briggs is in violation of the standard relating to fair dealing. This is because he has not charged the same commission rate for all the accounts participating in a block trade.
Briggs is in compliance with the suitability standard by excluding Lake's account from the block trade. Lake is not willing to participate in highly risky trades and so the trade allocation will be unsuitable in light of her risk appetite.

Briggs is not in violation of the standard relating to communication with clients and prospects. Given that the issue is still inappropriate for Lake's account, communicating the ratings change is unnecessary.

10. Jason Lee is senior portfolio manager at Motto Trust, an asset advisory firm. To enhance his tax management skills, Lee has been invited to attend a tax conference which is sponsored by a tax advisory firm owned by one of his clients. The client has offered to fully pay for transportation to the conference but Lee declines and instead opts for his own arrangement. Lee informs his supervisor of the conference invitation received before departing. At the conclusion of the conference, the senior manager of the tax advisory firm invites Lee to an exclusive golf club, which he accepts. He informs his employer about the invitation upon returning to work the following day.

Has Lee violated any CFA Institute Standards of Professional Conduct?

A. No.
B. Only with respect to attending the conference.
C. Only with respect to accepting the golf club invitation.

Correct Answer: A

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

Lee has not violated any CFA Institute Standards of Professional Conduct. By declining the client's offer to pay for transportation, he is in compliance with the standard relating to independence and objectivity. Furthermore, he has not violated any standard by accepting the golf club invitation. He had informed his employer about his visit after his return. Also, given that knowledge of the club invitation was not available beforehand, informing his employer upon returning to the firm is the best course of action.

11. Jessica March and Adam Pocock are CFA Level III candidates as well as colleagues. The two candidates regularly study together for the Level III exam. During one of their study sessions the two individuals engage in a discussion,

March: "Earlier in the year I had a discussion with Tim Martin, a Level III candidate, who said that the most recent exam was very 'difficult'."

Pocock: "Difficult or not, with my relevant work experience, I am confident that I will become a charterholder shortly following completion of the Level III exam."

According to the *Standards of Practice Handbook*, which individual is *most likely* in violation?

A. March; she has shared confidential information with Pocock.
B. Pocock; he has made a guarantee regarding the receipt of the charter.
C. March; she has engaged in a discussion with Martin regarding the exam contents.

Correct Answer: B

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

March is not in violation of the CFA Institute Standards of Professional Conduct; this is because she has not shared specific exam information concerning the appearance of questions on the exam or any broad topical areas. Therefore she has maintained the confidentiality of the CFA exam program.

Pocock, on the other hand, is in violation of the standard relating to reference to the CFA Institute, the CFA Designation, and the CFA Program; this is because he has made an explicit guarantee with respect to the final award of the charter; the final award is subject to meeting the CFA Program requirements and approval by the CFA Institute Board of Governors.

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

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

Correct Answer: C

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

A member or candidate is not in violation by using skills and experiences gained at the previous place of employment in the workplace.

Using a business plan generated for the employer to start a new business is construed as self-dealing which represents a violation of the employer loyalty standard.
Soliciting clients prior to the cessation of employment represents a violation of the standards concerning employer loyalty.

13. The criteria used when evaluating secondary or third-party research *least likely* includes:

    A. reviewing the assumptions used.
    B. evaluating the quality of the researcher's internal controls.
    C. determining the soundness of the researcher's established code of ethics.

Correct Answer: C

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

The criteria used when evaluating secondary or third-party research includes:

- assumptions used;
- rigor of analysis performed;
- date/timeliness of the research; and
- evaluate the objectivity and independence of the recommendations.

14. Harper Inc. is a financial services firm that was established on January 1, 2002. The firm claims compliance with the GIPS standards on January 1, 2009.

    In order to claim compliance, Harper Inc. initially:

    A. Is required to ensure the financial years, 2002-2006, are in compliance.
    B. Is required to ensure the financial years, 2002-2009, are in compliance.
    C. can link non-GIPS compliant performance with GIPS-compliant performance as long as disclosure is provided.

    Correct Answer: A

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

    On January 1, 2009 Harper has been in existence for seven years. On claiming compliance, the firm is required to **initially** present a minimum of five years (2002-2006) of GIPS-compliant investment performance.

    After the firm has presented the minimum of five years of GIPS-compliant investment performance, the firm must present an additional year of performance each year building a record of 10 years.

    Firms are not permitted to link non-GIPS compliant performance with GIPS-compliant performance after January 1, 2000.

15. In order to prevent misconduct, the *Standards of Practice Handbook* recommends members and candidates encourage their employers to:

    A. restrict employee participation in IPOs.
    B. establish written procedures for reporting violations.
    C. disseminate a list of potential violations and disciplinary sanctions to all firm employees.

    Correct Answer: C

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

In order to prevent misconduct, members and candidates should encourage their employers to adopt policies which disseminate a list of potential violations to all employees and associated disciplinary sanctions, up to and including dismissal from the firm; this is recommended by the CFA Institute Standard of Professional Conduct concerning misconduct.

Restricting employee participation in equity securities and IPOs is a recommended procedure for compliance with respect to the standard concerning independence and objectivity.

Encouraging their employers to establish procedures for reporting violations is a recommended procedure for compliance with respect to the standard concerning knowledge of the law.

16. According to the Fundamentals of Compliance section of the Global Investment Performance Standards, total firm assets must:

    A. not include assets assigned to a sub-advisor.
    B. include non-discretionary and discretionary assets.
    C. be included in composites on the basis of their respective book values.

Correct Answer: B

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

According to the Fundamentals of Compliance section, total firm assets must include the fair value of all discretionary and non-discretionary assets managed by the firm. This also includes fee- and non-fee paying portfolios.

Total firm assets must also include assets assigned to a sub-advisor provided the firm has discretion over the selection of the sub-advisor.

17. XYZ Inc is an investment management firm which claims compliance with the Global Investment Performance Standards. Each year firm management selects ten percent of prospective client requests and makes compliant presentations; this policy is based on a first-come, first-serve basis. Due to limited resources, the frequency of providing compliant presentations to prospective clients is annually, at a minimum. Existing clients are provided an annual compliant presentation of a composite only if their portfolio is included.

Which component of XYZ Inc's compliant presentation policy is *most likely* consistent with the requirements of the Fundamental of Compliance section of the Global Investment Performance Standards?

A. The presentation policy for existing clients.
B. The first-come, first-serve performance presentation policy.
C. The frequency of providing presentations to prospective clients.

Correct Answer: C

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

According to the fundamentals of compliance section, requirements include:

- With respect to presenting performance to prospective clients, firms must not choose to whom they present a compliant presentation; XYZ Inc's performance presentation policy is inconsistent with this requirement.
- As long as a prospective client has received a compliance presentation within the previous 12 months, the firm has met this requirement; XYZ Inc's policy with respect to the frequency of providing presentations to prospective clients is consistent with this requirement.

The policy with respect to providing compliance presentations to existing clients is a recommendation of the Global Investment Performance Standards.

18. Which of the following is a section of the Global Investment Performance Standards?

    A. Hedge funds
    B. Record retention
    C. Wrap fee portfolios

Correct Answer: C

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

Based on the options presented, wrap fee portfolios represents a valid section of the Global Investment Performance Standards.

Questions 19 to 32 relate to Quantitative Methods

19. A project with an opportunity cost of capital equal to the internal rate of return should *most likely*:

    A. have no impact on shareholder wealth.
    B. be expected to increase shareholder wealth.
    C. be expected to decrease shareholder wealth.

    Correct Answer: A

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

    When the opportunity cost of capital is equal to the internal rate of return, the net present value is zero. This implies that a project should have no impact on shareholder wealth; i.e. it should neither increase nor decrease wealth.

20. Grace Nicholson is choosing between two five-year investment plans with a quoted rate of 8% and 12% respectively, each of which are compounded continuously. Nicholson intends to invest $250,000 with the objective of generating a minimum amount of $270,000 for her daughter's college education. She is not concerned with maximizing her return.

    To achieve her objective, Nicholson will opt for:

    A. either of the two savings plan.
    B. the savings plan with a quoted rate of 8%.
    C. the savings plan with a quoted rate of 12%.

    Correct Answer: A

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

    Given that the returns for the two projects are compounded continuously, the effective annual rate (EAR) needs to be determined.

$EAR = e^{r_\infty} - 1$
EAR = ($250,000)$e^{(0.08)}$ = $270,821.77
EAR = ($250,000)$e^{(0.12)}$ = $281,874.21

Given that both plans generate an amount within Nicholson's range, she can opt for either of the two plans.

21. Equity investment styles will *most likely* be classified using a (n):

    A. ratio scale.
    B. ordinal scale.
    C. nominal scale.

    Correct Answer: C

    Reference:
    CFA Level 1, Volume 1, Study Session 2, Reading 7, LOS a

    Equity investment styles are classified using a nominal scale because these scales categorize data but do not rank them.

22. Several of TA's company employees are retiring today. They have each been offered either to be paid a lump sum amount of $200,000 or an annuity with 30 payments of $15,000 starting from the date of retirement. TA's bank has quoted an interest rate of 8% compounded semi-annually.

    If employees select the alternative that generates the greatest amount of wealth, they will *most likely*:

    A. opt for a lump sum amount.
    B. opt for an annuity payment.
    C. be indifferent between the two alternatives.

    Correct Answer: B

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

To determine which alternative will increase employee wealth, the present values of both alternatives need to be determined.
Lump sum payment alternative's present value = $200,000

Annuity payment alternative's present value:

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

$$PV = \$15{,}000\left[\frac{1-\frac{1}{(1+0.08/2)^{29\times 2}}}{0.08/2}\right] = \$336{,}444$$

Employees will opt for an annuity payment alternative as it offers greater present value.

23. A discrete uniform distribution comprises of outcomes which:

    A. take on a range of values.
    B. are significant in number.
    C. are equally likely in occurrence.

Correct Answer: C

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

A discrete uniform distribution comprises of outcomes which are finite, equally likely in occurrence, and take specific on specified values.

24. A normal distribution is characterized by:

    A. a skewness of 3.
    B. the parameters mean, median and mode.
    C. a linear combination of two or more normally distributed variables.

Correct Answer: C

Reference:
CFA Level 1, Volume 1, Study Session 2, Reading 9, Los m

Characteristics of a normal distribution include the following:

- it is described by two parameters, its mean and variance;
- a skewness of zero and kurtosis of 3; and
- a linear combination of two or more normal random variables is also normally distributed.

25. Intermarket analysis:

A. assumes markets form repetitive wave patterns.
B. uses relative strength analysis to make allocation decisions.
C. is based on the principle that each market has unique characteristics.

Correct Answer: B

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS h

Intermarket analysis uses relative strength analysis to identify sectors of the market to invest in. Observations based on intermarket analysis can help in allocating funds across national markets.

Intermarket analysis is based on the principle that markets are interrelated and influence each other.

The Elliot Wave Theory assumes markets form repetitive wave patterns.

26. The table below illustrates the covariance matrix for global equities, global bonds and real estate held in the proportions 40%, 25% and 35% respectively, held in Ricardo Segal's portfolio.

Exhibit
Covariance Matrix

	Global equities	Global bonds	Real Estate
Global equities	125	150	80
Global bonds	150	45	90
Real estate	80	90	62

Based on the information, the standard deviation of Segal's portfolio return is *closest* to:

A. 5.93%.
B. 8.33%.
C. 9.93%.

Correct Answer: C

Reference:
CFA Level 1, Volume 1, Study Session 2, Reading 8, LOS l

$$\sigma^2(R_p) = w_1{}^2\sigma^2(R_1) + w_2{}^2\sigma^2(R_2) + w_3{}^2\sigma^2(R_3) + 2w_1w_2CovR_1R_2 + 2w_1w_3CovR_1R_3 + 2w_2w_3Cov(R_2, R_3$$

= $(0.40)^2(125) + (0.25)^2(45) + (0.35)^2(62) + 2(0.40)(0.25)(150) +$
$2(0.40)(0.35)(80) + 2(0.25)(0.35)(90)$
= 98.5575

$$\sigma(R_p) = \sqrt{98.5575} = 9.93\%$$

27. In order to conduct hypothesis testing a:

A. significance level must be defined as a starting point.
B. decision rule must be stated prior to specifying the significance level.
C. statistical decision involves determining whether the null hypothesis is accepted or rejected.

Correct Answer: C

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 11, LOS a

Making a statistical decision involves comparing the test statistic to the critical value and determining whether the null hypothesis is accepted or rejected accordingly.

The significance level must be specified before stating the decision rule. Hypothesis testing begins with stating the hypotheses.

28. The sample mean difference between the returns of two funds managing identical emerging market equities is – 0.55% per quarter. The mean difference was calculated using data observed over the past thirty quarters. The standard deviation of the sample mean difference is 5.32%. The t-distribution table to be used for the analysis is as follows:

Exhibit:
Student's t-distribution Table

Degrees of freedom	.05 (One tail) .10 (Two tail)	.10 (One tail) .20 (Two tail)
28	1.701	1.313
29	1.699	1.311
30	1.645	1.282

Using a 10% significance level, the difference between the mean quarterly returns is:

A. not significant.
B. significant; the calculated t-statistic of – 0.100 is greater than critical value of – 1.699.
C. significant; the calculated t-statistic of – 0.026 is greater than the critical value of – 1.311.

Correct Answer: B

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 11, LOS i

The calculated test statistic is – 0.10% [(- 0.55% - 0)/5.32%].

Given that this is a one-sided hypothesis test and based on 29 (30 – 1) degrees of freedom, the upper and lower t-critical values are + 1.699 and – 1.699. The calculated test statistic is greater than the t-critical value that implies that the difference in mean quarterly returns is significant.

29. Which of the following reasons *most likely* justifies why a parametric test may be preferred over a nonparametric test?

A. The sample data is ranked.
B. The population has an infinite variance.
C. The distribution is defined by more than two parameters.

Correct Answer: A

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 11, LOS k

A nonparametric test is used in those situations where the assumptions of a parametric test are not satisfied; that is, when the data are given in ranks, or when the hypothesis we are addressing does not concern a parameter, or when the data does not meet distributional assumptions.

30. In contrast to a bar chart, the candlestick chart:

A. makes price volatility more visible.
B. indicates market volatility by the height of the candle.
C. illustrates opening, closing, high and low prices during a particular period.

Correct Answer: A

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS b

An advantage of the candlestick chart over the bar chart is that price moves (price volatility) is much more visible.

The bar chart indicates market volatility by the height of each bar.

Both the candlestick chart and bar chart show opening, closing, high and low prices during the day.

31. The exhibit below illustrates average monthly market price change for the ABC Corp stock for the first seven months of the financial year 2013.

Exhibit: Average Monthly Price Change For the First Seven Months

Month	Average Price Change (%)
January to February	- 0.8
February to March	- 1.2
March to April	- 1.9
April to May	- 2.5
May to June	- 2.7
June to July	- 3.4

Based on the average price change, which of the following statements is *most likely* correct regarding the ABC Corp stock?

A. Investors believe the stock's intrinsic value is increasing.
B. The forces of supply and demand are roughly in balance.
C. Sellers are willing to accept lower prices to enter new short positions.

Correct Answer: C

Reference:
CFA Level 1, Volume 1, Study Session 3, Reading 12, LOS c

Since the market price is making lower lows, the ABC stock is undergoing a downtrend. In a downtrend, supply is overwhelming demands and sellers are willing to accept lower and lower prices to exit their existing position or enter new short positions.

32. Samuel Edgar is a technical analyst at Slater Associates, a market research firm. He is analyzing price trends in the market price of the Elster Inc stock, a food processor. His analysis of the market prices leads him to conclude that a head and shoulders pattern is being observed. Using historical market prices, he constructs a chart and observes that the share peaked at $45 and estimates the neckline at $32.

To profit from the analysis, the share price should:

A. rise by $13.
B. decline to $19.
C. decline by $19 below the neckline.

Correct Answer: B

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

The head and shoulders formation is a bearish indicator which suggests that a technician would expect a previously established uptrend to end and a downtrend to commence. To profit from an anticipated decline in security price, the analyst will seek to short the security under analysis.

Based on the calculated price target, Edgar would anticipate the security price to decline to $19 or $13 below the neckline (see below).

Price target = Neckline – (Head – Neckline)
= $32 – ($45 – $32) = $19

Questions 33 to 44 relate to Economics

33. Which of the following auction mechanisms will result in the highest bidder paying a price equal to the second-highest bid?

    A. Private value auction.
    B. Descending price auction.
    C. Second price sealed bid auction.

    Correct Answer: C

    Reference:
    CFA Level 1, Volume 2, Study Session 4, Reading 13, LOS i

    In a second sealed price bid mechanism, the winning buyer is the one who submitted the highest bid but the price paid is equal to the second highest bid.

34. Narita is a developing country experiencing rapid industrialization with a local currency, NR. The living standards and household incomes are also improving with many replacing motorcycles for automobiles. The demand function for automobiles is given below. P_a is the price of automobiles, I equals household monthly income, and P_m equals the per unit price of motorcycles. The household income is NR 1,500 and the price of a motorcycle is NR 450. The market consists of 5,000 consumers with this demand function.

$$Q^d{}_a = 40 - 2.3(P_a) + 0.0007I + 1.2P_m$$

    Based on the data provided and holding all else constant, the inverse demand function is *most likely*:

    A. $252.63 - 0.00009Q^d{}_a$.
    B. $252.63 - 0.435Q^d{}_a$.
    C. $200{,}000 - 11{,}500(P_a) + 3.5I + 6{,}000P_m$.

    Correct Answer: A

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

Holding household income and the per unit price of motorcycles constant, we find

Q^d_a = 5,000[40 – 2.3(P_a) + 0.0007(1,500) + 1.2(450)]
= 200,000 – 11,500(P_a) + 5,250 + 2,700,000
= 2,905,250 – 11,500P_a

Solving for P_a = 252.63 – 0.00087Q^d_a or 252.63 – 0.00009Q^d_a

35. A company is operating in a monopoly market with marginal revenue kept at a constant level of \$35 and a price elasticity of demand of 1.2. The profit maximizing price is *closest* to:

A. \$5.83.
B. \$35.00.
C. \$210.00.

Correct Answer: C

Reference:
CFA Level 1, Volume 2, Study Session 4, Reading 16, LOS d

MR = P[1 – 1/E_p]
P = MR/[1 – 1/E_p] = \$35/[1 – 1/1.2] = \$210.00

36. Which of the following monetary policy tools will *most likely* reduce the amount of money in circulation in an economy?

A. Reducing the policy rate.
B. Reducing the level of government spending.
C. Increasing the percentage reserve requirement for banks.

Correct Answer: C

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

Increasing the percentage reserve requirement for banks will shrink money supply as a bank that was short on reserve requirements may have to cease lending until it builds the necessary reserves.

Reducing the policy rate will reduce the potential penalty that banks will have to pay the central bank if they run short of liquidity; this will increase their willingness to lend and thus will cause the broad money growth to expand.

Government spending is a fiscal policy tool which is not used to influence money supply in an economy.

37. Laxline Inc. is an Australian pharmaceutical that is expecting a shipment of inventory from South Africa in three months' time. To hedge any associated foreign exchange risk, the corporate treasurer decides to obtain quotations from two separate dealers, A and B (Exhibit). Laxline Inc. will hedge risk by selling the ZAR forward.

Exhibit
Exchange Rate Quotation from Two Dealers, A and B

		A	B
ZAR/AUD spot rate	9.90	-	-
Three-month forward premium (%)		0.8	1.1

Based on the information provided in the Exhibit, Laxline Inc. will *most likely* buy AUD from dealer:

A. dealer A at rate of ZAR 0.0792 per AUD and not trade with dealer B.
B. B and sell to dealer A earning a profit of ZAR 0.0030 per AUD transacted.
C. A and sell to dealer B earning a profit of ZAR 0.0297 per AUD transacted.

Correct Answer: C

Reference:
CFA Level 1, Volume 2, Study Session 6, Reading 21, LOS h

Dealer A will be buying AUD 3 months forward at $9.90 \times (1 + 0.008) = 9.9792$ while Dealer B will be buying AUD forward at $9.90 \times (1 + 0.011) = 10.0089$. Therefore, to profit from the transaction Laxline Inc. should sell AUD at the higher rate (10.0089) to Dealer B and buy AUD at a lower rate (9.9792) from Dealer A. The profit earned for each AUD transacted will amount to ZAR 0.0297.

38. A fixed-rate system is characterized by:

A. explicit legislative commitment to maintain a specified parity.
B. monetary independence being subject to the maintenance of an exchange rate peg.
C. target foreign exchange reserves bearing a direct relationship to domestic monetary aggregates.

Correct Answer: B

Reference:
CFA Level 1, Volume 2, Study Session 6, Reading 21, LOS i

A fixed-rate system differs from a currency board system in two ways. Firstly, there is no explicit legislative commitment to maintain a specified parity. Secondly, the target level of foreign exchange reserves is discretionary bearing no particular relationship to domestic monetary aggregates. However, monetary independence is subject to the maintenance of the exchange rate peg.

39. 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

40. Which of the following components is *least likely* excluded from a country's GDP but not GNP? The market value of goods and services produced by:

A. foreigners in that country.
B. citizens residing in a different country.
C. domestic companies outsourcing production overseas.

Correct Answer: A

Reference:
CFA Level 1, Volume 2, Study Session 6, Reading 20, LOS a

GDP includes the final market value of all goods and services produced by factors of production located within a country/economy during a period of time. GNP measures the market value of goods and services produced by factors of production supplied by residents regardless of whether production takes place within the country or outside. The difference between the two is that GDP includes, and GNP excludes, the production of goods and services by foreigners residing in a particular country. On the other hand, GNP includes, and GDP excludes, the production of goods and services by its citizens outside of the country.

41. The price a consumer pays for agriculture machinery in a country is \$500. The market demand function for agricultural machinery is given by the equation, Q^d = 2,400 – 3P.

Based on the information provided the amount by which the value of agricultural machinery exceeds purchase costs is *closest* to:

A. 135,000.
B. 225,000.
C. 600,000.

Correct Answer: A

Reference:
CFA Level 1, Volume 2, Study Session 4, Reading 13, LOS j

Consumer surplus, which is the difference between the value that the consumer places on a good and the amount of money required to pay for them.

Based on the \$500 paid for machinery, $Q^d = 2{,}400 – 3(500) = 900$, inverting the demand function and solving for the price intercept we get $P = 800 – 0.3333Q$. Based on the equations, the price intercept is 800 and the quantity intercept is 2,400.

Consumer surplus = ½ × 900 × (800 – 500) = 135,000

42. A country's economic growth is enhanced by an increase in:

A. the birth rate.
B. the degree of market regulation.
C. government spending on education.

Correct Answer: C

Reference:
CFA Level 1, Volume 2, Study Session 5, Reading 17, LOS l

Sources of economic growth include:

- Labor supply;
- Human capital;
- Physical capital;
- Technology; and
- Natural resources.

Increasing the level of government spending on education will improve the quality of human capital that in turn will contribute to economic growth.

Labor supply is the growth in the number of people available for work and is measured by the product of labor force and average hours worked per worker. The labor force is the proportion of working age population that is employed or unemployed. An increase in a country's birth rate will not enhance the labor supply and thus economic growth in the near- to medium term.

Making market regulation more stringent has no direct impact on economic growth.

43. Mathew Hughes is a market analyst studying economic variables in China. The 12-month local Chinese government debt currently offers an annual yield of 5% while current inflation is 3%. Investors expect Inflation to rise to 4% in the coming year and desire a real yield of 1% on the government debt. Hughes believes that investors have overestimated expectations and that inflation rate should in fact rise to 2%.

Based on Hughes' expectations and the Fisher effect, in order to compensate for the forecasted inflation and preserve real return, the government debt yield should *most likely*:

A. rise by 1%.
B. decline by 1%.
C. decline by 2%.

Correct Answer: C

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

According to the Fisher effect, the nominal interest rate is the sum of the real interest rate and expected inflation.

Based on Hughes' expectations a nominal government debt yield of 3% (1% + 2%) should preserve the real return demanded by investors. To compensate for the lower expected inflation the nominal government debt yield should thus decline by 2% (5% - 3%).

44. Tyra Atkinson is an economic analyst covering Southeast Asian markets. Based on her findings she has determined that Thailand's inflation target is 4% per year while the economy is forecasted to grow at a rate of 5% per year for two years after which it will settle to a sustainable long-term rate of 3%. Atkinson will conclude that the monetary policy will be expansionary if the central bank sets the policy rate at:

    A. 2%.
    B. 4%
    C. 8%.

Correct Answer: C
Reference:
CFA Level 1, Volume 2, Study Session 5, Reading 19, LOS n

A central bank's monetary policy is described as being expansionary if the policy rate is above the neutral rate of interest; the latter is described as a rate which neither speeds up nor slows down the underlying economy.

Neutral rate = Trend growth + Inflation target
= 3% + 4% = 7%.

Therefore Atkinson will conclude that Thailand's monetary policy is expansionary if the policy rate is set at any rate above 7%.

Questions 45 to 68 relate to Financial Reporting and Analysis

45. The exhibit below highlights selective financial information concerning Green Enterprises. Martha Lewis, the company's chief financial analyst, is evaluating the change in the company's tolerance for leverage between 2012 and 2013. She has collected relevant data in the exhibit below:

Exhibit
Relevant Financial Data for Green Enterprises, 2012-2013 (In Millions)

	2013	2012
Operating cash flow*	8.9	7.7
Working capital changes	0.1	(0.3)
Dividends paid	3.4	3.6
Interest paid	2.9	2.7
Total debt	17.2	15.4

*The figure is prior to working capital changes

Based on the data presented and ignoring any capital expenditures, Green Enterprises' tolerance for leverage has *most likely*:

A. improved.
B. deteriorated.
C. remained unchanged.

Correct Answer: A

Reference:
CFA Level 1, Volume 3, Study Session 10, Reading 34, LOS c

Green Enterprises' tolerance for leverage is measured using the retained cash flow (RCF) to total debt ratio. Retained cash flow is calculated as operating cash flows before working capital changes less dividends.

All $ figures are in millions.

Tolerance for leverage (2012) = ($7.7 – $3.6)/$15.4 = 0.2662
Tolerance for leverage (2013) = ($8.9 – $3.4)/$17.2 = 0.3198

A ratio of 0.2662 indicates that the company may be able to pay off debt from cash flow retained in the business in approximately 3.8 years (1/0.2662) while a ratio of 0.3198 indicates that the company may be able to pay off debt from cash flow retained in the business in approximately 3.1 years (1/0.3198). Therefore, Green's tolerance for leverage has improved over the two years.

46. A company's tax expense represents:

   A. the amount paid for income taxes.
   B. a provision made for its income taxes.
   C. an aggregate of its income tax payable and any changes in deferred taxes and liabilities.

Correct Answer: C

Reference:
CFA Level 1, Volume 3, Study Session 9, Reading 31, LOS a

A company's tax expense represents an aggregate of its income tax payable and any changes in deferred taxes and liabilities.

The amount paid for income taxes is represented by income taxes paid while income tax payable represents a provision made for income taxes on a company's balance sheet.

47. Valaroy entered into a lease agreement to acquire equipment for five years beginning January 1, 2011. The lease requires five annual payments of $35,450 with the first due on January 1, 2011. The useful life of the equipment is six years and the salvage value is zero. The fair value of the equipment is $147,820 and the applicable discount rate is 10%. Valaroy prepares and presents its financial statements in accordance with U.S. GAAP.

In relation to the lease agreement, in the fiscal year 2012, Valaroy will report:

A. a lease liability of $88,159 on its balance sheet.
B. rental expense of $35,450 in its income statement.
C. interest expense of $14,782 in its income statement.

Correct Answer: A

Reference:
CFA Level 1, Volume 3, Study Session 9, Reading 32, LOS h

The lease will be recognized as a capital lease by Valaroy. This is because the lease term is more than 75% of the useful life of the leased asset and the present value of the leased payments are more than 90% of the fair value of the leased asset (see below).

Present value of leased payments:

$$35{,}450+\frac{35{,}450}{1.1}+\frac{35{,}450}{(1.1)^2}+\frac{35{,}450}{(1.1)^3}+\frac{35{,}450}{(1.1)^4}=147{,}821$$

Year	Lease liability, 1 January	Annual Interest Payment	Interest (at 10%; accrued in previous year)	Reduction of lease liability, 1 January	Lease liability on 31 December after Lease Liability Payment on 1 January Same Year
2011	$147,821	$35,450	$0	$35,450	$112,372
2012	$112,372	$35,450	$11,237	$24,213	$88,159

48. Deferred taxes related to a business combination:

A. must be recognized in equity.
B. are not allowed to be recognized under IFRS.
C. must be recognized as an asset or liability depending on the carrying amount and tax base of the goodwill.

Correct Answer: A

Reference:
CFA Level 1, Volume 3, Study Session 9, Reading 31, LOS h

Deferred taxes related to a business combination must be recognized in equity. IFRS prohibits the recognition of deferred taxes related to goodwill arising in a business combination.

49. Boston Associates, a newspaper agency, exchanged a large printing unit with an original cost of $400,000 for a used unit with a carrying value and purchase price of $280,000 and $500,000, respectively, in year 2013. The original unit, purchased in 2011, had an estimated useful life of five years, a residual value of $30,000 and was being depreciated using the straight-line method.

Due to its lack of popularity and thus market, the fair value of the acquired unit cannot be determined with certainty. The purchase and exchange activities were undertaken in the beginning of the respective fiscal years.

In relation to the exchange, Boston Associates will:

A. not report a gain or loss in its income statement and will record the unit at a value of $280,000 in its balance sheet.
B. report a gain of $28,000 in its income statement and will record the unit at a value of $252,000 in its balance sheet.
C. not report a gain or loss in its income statement and will record the unit at a value of $252,000 in its balance sheet.

Correct Answer: C

Reference:
CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS i

When an asset is exchanged, accounting for it involves removing the carrying value of the asset given up and replacing it with the fair value of the acquired asset. However, if a fair value is not available, the acquired asset will be recorded at the carrying amount of the asset given up.

Annual depreciation expense of asset given up = ($400,000 – $30,000)/5 = $74,000

Carrying amount of asset given up = $400,000 – ($74,000 × 2) = $252,000

Since the acquired asset is recorded at the carrying value of the asset given up, neither a gain nor loss will be reported in Boston's income statement.

50. A decline in the inventory balance in a particular accounting period should *most likely* lead to a decline in:

A. the debt-to-capital ratio.
B. working capital turnover.
C. the days of inventory on hand.

Correct Answer: C

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

The days of inventory on hand measure includes inventory turnover as its denominator. A decline in closing inventory balance will lead to an increase in the inventory turnover ratio and consequently a decline in days of inventory on hand.

The debt-to-capital ratio comprises total debt in its numerator and capital (debt plus equity) in its denominator. A decline in inventory balance will not affect this ratio.

The working capital turnover should rise following a decline in closing inventory balance. The denominator of this measure is working capital which is equal to the difference between current assets and current liabilities. Therefore a declining inventory balance will decrease the denominator and lead to a rise in this measure.

51. On January 1, 2011 Kyrax Inc purchased an image processing unit for $250,000. The estimated useful life and residual value of the unit were eight years and $85,000 respectively. In the same year Kyrax reported operating profit of $650,000.

Relative to the straight-line method, in 2011, the double declining depreciation method will produce an operating profit that is:

A. $20,625 lower.
B. $41,875 lower.
C. $17,500 higher.

Correct Answer: B

Reference:
CFA Level 1, Volume 3, Study Session 9, Reading 30, LOS c & d

Depreciation expense (straight-line) = ($250,000 – $85,000)/8 = $20,625
Depreciation expense (double declining) = 1/8 × 2 × $250,000 = $62,500

In 2011 the depreciation expense will be higher and operating profit lower by $41,875 ($62,500 – $20,625) under the double declining method.

52. Which of the following accurately highlights the treatment of a bank overdraft in the cash flow statement under IFRS and U.S. GAAP?

	IFRS:	U.S. GAAP:
A.	Operating activity	Operating activity
B.	Cash equivalents	Financing activity
C.	Operating activity	Financing activity

Correct Answer: B

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

Bank overdrafts are treated as cash equivalents under IFRS and financing activity under U.S. GAAP.

53. Lima is a limestone extractor operating in the U.S. The extractor's chief financial analyst, Carl Douglas, has summarized selective financial information for the years 2010 to 2013 in the exhibit below.

Exhibit:
Financial Information for 2011-2013

$ millions	2013	2012	2011
Operating cash flow	35.8	30.9	38.6
EBIT	20.5	22.8	25.0
Long-term debt	12.0	10.4	8.6
Short-term borrowing	8.5	7.6	5.4
Interest payments	2.2	1.6	1.0
Lease payments*	21.0	16.0	18.5

*Interest payments represent 1/3 of lease payments

Lima's fixed charge coverage ratio is the highest in:

A. 2011.
B. 2012.
C. 2013.

Correct Answer: A

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

Fixed charge coverage ratio = EBIT + Lease payments*/(Interest payments + Lease payments*)
Fixed charge coverage ratio (2013) =
[20.5 + (21.0 × 1/3)]/[2.2 + (21.0 × 1/3)] = 2.989

Fixed charge coverage ratio (2012) =
[22.8 + (16.0 × 1/3)]/[1.6 + (16.0 × 1/3)] = 4.058

Fixed charge coverage ratio (2011) =
[25.0 + (18.5 × 1/3)]/[1.0 + (18.5 × 1/3)] = 4.349

*The interest portion of lease payments is included in the calculation.

54. A ratio that contains cash flow from operations in its numerator and cash outflows from investing and financing activities in its denominator measures:

    A. solvency and the ability to acquire and pay down debt.
    B. profitability and the cash generating ability of operations.
    C. solvency and the company's ability to acquire assets, pay debt and make distributions to owners.

Correct Answer: C

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

The investing and financing coverage ratio comprises cash flow from operations in its numerator and cash outflows for investing and financing activities in its denominator. This coverage ratio measures solvency as well as the ability of a company to acquire assets, pay debts, and make distributions to owners.

55. Martha Townshead is analyzing selective financial information for Fisher Corp. for the years 2012 and 2013. Fisher Corp. complies with U.S. GAAP.

$'000s	2013	2012	Change
Net income	255	207	+ 48
Depreciation & amortization	28	20	+ 8
Accounts receivable	180	135	+ 45
Inventory	89	95	– 6
Accounts payable	140	128	+ 12
Interest payable	56	50	+ 6
Taxes payable	48	53	– 5
Accumulated depreciation	128	105	+ 23
Short-term debt	107	98	+ 9

Using the indirect method, Fisher Corp's cash flow from operating activities is *closest* to:

    A. $140,000.
    B. $247,000.
    C. $279,000.

Correct Answer: B

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

All $ figures are in 000's.

Operating cash flow:	
Net income	$255
+ Depreciation & amortization	8
- Increase in accounts receivable	(45)
+ Decrease in inventory	6
+ Increase in accounts payable	12
+ Increase in interest payable	6
- Decrease in taxes payable	5
Net cash flow from operating activities	247

56. The exhibit below highlights selective financial measures observed for Horizon Gates for the years 2012 and 2013, assuming 365 days in a financial year.

	2013	2012	Year-on-year change (%)
Inventory turnover	15	12	+ 20.00%
Receivables turnover	75	70	+ 7.14%
Payables turnover	45	80	- 77.78%

Based on the year-on-year changes observed for the highlighted measures, which of the following explanations is *most likely* appropriate?

A. Horizon's credit policy has become more stringent.
B. Horizon is taking advantage of early payment discounts.
C. The average number of days for holding inventory has decreased by 20%.

Correct Answer: C

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

The average number of days for holding inventory is measured using the days of inventory on hand (DOH), calculated as: number of days in period/inventory turnover. The measures observed for the two years are calculated below. The decline in measure is 20.00% [(24.333/30.417) – 1].

DOH (2012) = 365/12 = 30.417
DOH (2013) = 365/15 = 24.333

An improvement in the receivables turnover ratio observed between 2012 and 2013 suggests either Horizon's cash collection practices have become more efficient or that its credit policy has become more stringent.

The payables turnover ratio measures how many times a year the company theoretically pays off all its creditors. A decline in the measure suggests that the company may be delaying payments and thus may not be taking advantage of early payment discounts.

57. Duckworth Associates is a book publishing firm preparing and presenting its financial statements in accordance with U.S. GAAP. In the current year Duckworth sold a printing unit for $2,056,000. A financial analyst has collected selective financial information for the purpose of analysis:

Beginning balance equipment	$4,560,000
Ending balance equipment	$3,120,000
Capital expenditures	$14,980
Annual depreciation expense	$44,870
Beginning balance accumulated depreciation	$980,000
Ending balance accumulated depreciation	$1,015,000
Remaining useful life of equipment sold	3 years

The gain on the sale of the unit is *closest* to:

A. $601,020.
B. $610,890.
C. $1,445,110.

Correct Answer: B

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

Beginning balance equipment	$4,560,000
Plus: capital expenditures	14,980
Minus: Ending balance equipment	(3,120,000)
Equals historical cost of equipment sold	1,454,980

Beginning balance accumulated depreciation	$980,000
Plus: depreciation expense	44,870
Minus: Ending balance accumulated depreciation	(1,015,000)
Equals accumulated depreciation on equipment sold	9,870

Net book value of equipment sold = $1,454,980 – $9,870 = $1,445,110
Gain on asset sale = $2,056,000 – $1,445,110 = $610,890

58. A key difference between IFRS and U.S. GAAP with respect to cash flow reporting is that:

A. U.S. GAAP do not permit the use of the indirect format.
B. IFRS provide greater discretion in classifying interest and dividends.
C. IFRS require supplementary reconciliation if the indirect format is used.

Correct Answer: B

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

IFRS allow greater discretion in the reporting of interest and dividends while U.S. GAAP do not. For instance, under IFRS interest paid may be classified as either an operating or financing activity. However, U.S. GAAP require interest paid and received to be classified as operating activities.

Both U.S. GAAP and IFRS permit the use of the indirect format with the former requiring the presentation of supplementary reconciliation (between net income and cash flow) if the direct format is used.

59. The exhibit below highlights selective information from Baxter Inc's financial statements for the years 2012 and 2013. Baxter prepares and presents its financial statements in accordance with IFRS.

$ Millions	2013	2012
Revenue	60	55
Cost of goods sold	42	38
Net income	14	10
Dividends paid*	8	6
Inventory	20	25
Accounts payable	18	16
Cash	5	4

*Classified as a financing cash flow

The amount of cash paid by Baxter Inc. to its suppliers is *closest* to (in millions):

A. $10.
B. $35.
C. $45.

Correct Answer: B

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

Cash paid to suppliers = Cost of goods sold + Increases in inventory – increase in accounts payable

Cash paid to suppliers ($ millions) = 42 + (20 – 25) – (18 – 16) = 35

60. The impact of impairment loss on net profit margin is that the financial measure will:

A. increase.
B. decrease.
C. remain unchanged.

Correct Answer: B

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

Net profit margin = net profit/sales
Impairment losses will decrease current period net income (numerator).
Therefore, the financial measure will decrease.

61. Trans Limited is a train operator in France which prepares and presents its financial statements in accordance with IFRS. Mark Sentosa is one of the operator's financial officers. Sentosa is attempting to determine whether one of the steam engines has undergone an unexpected decline in value. Sentosa has collected information requisite to his analysis below:

Carrying value	€875,000
Fair market value	€895,000
Expected annual cash over useful life	€30,000
Estimated selling price (year 6)	€800,000
Estimated remaining useful life	6 years
Required rate of return	10%
Selling costs	€35,550

In relation to the steam engine, Sentosa will record an impairment loss amounting to:

A. €15,550.
B. €20,000.
C. €292,763.

Correct Answer: A

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

Under IFRS, impairment occurs when the asset's recoverable amount falls below its carrying amount.

Recoverable amount = Higher of fair value less costs to sell and value in use

Value in use = present value of the future cash flows expected to be derived from using the asset

Value in use = $\frac{€30,000}{1.10} + \frac{€30,000}{1.10^2} + \frac{€30,000}{1.10^3} + \frac{€30,000}{1.10^4} + \frac{€30,000}{1.10^5} + \frac{(\$30,000+\$800,000)}{1.10^6} =$ €582,237

Fair value less costs to sell = €895,000 – €35,550 = €859,450

Given that fair value less costs to sell is higher, the recoverable amount is equal to €859,450. An impairment loss of €15,550 (€875,000 – €859,450) will be recorded in the income statement since the recoverable amount has declined below the carrying value.

62. The purchase of Treasury stock should positively influence a company's:

A. quick ratio.
B. debt-to-equity ratio.
C. return on equity ratio.

Correct Answer: C

Reference:
CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS f & i

The purchase of Treasury stock will reduce a company's cash (assets) and equity. The transaction will have no effect on a company's net income. The company's return-on-equity ratio should increase which results in an improvement in the company's profitability.

A decrease in cash (assets) resulting from the purchase of Treasury stock will reduce the company's quick ratio and result in a weaker liquidity position.

The company's debt-to-equity ratio will increase due to a decrease in total equity; an increase in the leverage measure implies greater financial risk and a weaker financial position.

63. The exhibit below illustrates selective financial information for Trax Limited for the years 2012 and 2013:

$ Millions	2013	2012
Accounts payable	35	28
Current portion of long-term debt	24	20
Long-term debt	80	110
Common stock	125	140
Additional retained earnings	35	80

Over the two years, the firm's usage of long-term debt relative to total capital has *most likely*:

A. increased.
B. decreased.
C. remained unchanged.

Correct Answer: C

Reference:
CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS h

Based on the measures calculated below, Trax's proportion of long-term debt to total capital has remained unchanged.

All $ calculations are in millions.
Total capital = Long-term debt + shareholders' equity

Total capital (2012) = $140 + $80 + $110 = $330
Total capital (2013) = $125 + $35 + $80 = $240

Long-term debt-to-total capital (2012) = $110/$330 = 0.33
Long-term debt-to-total capital (2013) = $80/$240 = 0.33

64. A company has reported the following financial information for the years 2012 and 2013:

$ Millions	2013	2012
Cash	45	30
Marketable securities	15	15
Receivables	185	190
Inventory	88	90
Current liabilities	120	140

The percentage change in the quick ratio over the two years is *closest* to:

A. 19.54%.
B. 21.63%.
C. 55.56%.

Correct Answer: B

Reference:
CFA Level 1, Volume 3, Study Session 8, Reading 26, LOS i

Quick ratio = (Cash + marketable securities + receivables)/current liabilities
Quick ratio (2012) = (30 + 15 + 190)/140 = 1.6786
Quick ratio (2013) = (45 + 15 + 185)/120 = 2.0417
Quick ratio percentage change = (2.0417/1.6786) – 1 = 21.63%

65. Period costs such as advertising expenditures:

A. are less likely to directly match revenues.
B. more directly relate to future expected benefits.
C. are accounted for using the cash basis of accounting.

Correct Answer: A

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

Advertising expenditures are examples of period costs which less directly match revenues and are reflected in the period when the company incurs the expenditure or incurs the liability to pay.

These expenditures are accounted for using the matching principle; i.e. when they are incurred regardless of when cash is paid.

66. On January 1, 2013 an investment company established office paying $65,000 to the landlord for space. 5% of the amount paid is a refundable deposit while the remaining represents the first month's rent.

The impact of the transaction on the company's net assets on January 1 is *most likely*:

A. neutral.
B. an increase of $3,250.
C. a decrease of $61,750.

Correct Answer: A

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

The company's cash (asset) account is decreased by $65,000 while deposits (asset) are increased by $3,250 ($65,000 × 0.05) and prepaid rent (asset) is increased by $61,750 ($65,000 × 0.95). The company's assets decreased by $65,000 and increased by a total of $65,000 ($61,750 + $3,250) resulting in a zero impact on net assets.

67. On a company's balance sheet shareholder's equity represents the owners':

A. financial position in a company.
B. claims on the resources of a company.
C. residual interest in a company's net assets.

Correct Answer: C

Reference:
CFA Level 1, Volume 3, Study Session 7, Reading 22, LOS b

Owners' equity is defined as the excess of a company's assets over liabilities or, in other words, net assets. Owners' equity is the owners' residual interest in the company's assets after deducting the liabilities (that is, the net assets).

68. Lizole is a bioengineering firm that is currently undertaking two projects.

Project 1: A prototype version of an apparatus to be used for stem cell research. The firm has received positive reviews from two laboratories having tested the apparatus. The apparatus has thus been determined to be technologically feasible, saleable and feasible to develop.

Project 2: Research undertaken for cancer diagnostic equipment aiming to take a more in-depth study of the growth and replication of cancer cells. An initial market survey has revealed significant potential for this project.

The expenses of the research division (in £ millions) are summarized below:

	Project 1	Project 2
Materials	420	130
Labor:		
Direct	705	858
Administrative	450	308
Overhead costs:		
Direct	155	120
Indirect	200	105
Reorganization	50	-

In relation to the two projects, the amount capitalized as an asset under IFRS is *closest* to:

A. £0.
B. £1,125.
C. £2,113.

Correct Answer: B

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

For internally created intangible assets, IFRS require companies to separately identify the research and development phase. Furthermore, IFRS require that costs to internally generate intangible assets during the research phase should be expensed while those incurred during the development phase should be capitalized as intangible assets if the project is technologically feasible, the company has demonstrated its ability to use or sell the resulting asset and the ability to complete the project.

Lizole can capitalize £1,125 million (£420 million + £705 million) of the costs with respect to project 1 which meets the criteria of development.

Questions 69 to 76 relate to Corporate Finance

69. Which of the following statements is *most likely* correct with respect to the break point on the marginal cost of capital schedule? It represents the point:

    A. of optimal capital budget.
    B. where the marginal cost of capital is lowest.
    C. where a company's marginal cost of capital changes.

    Correct Answer: C

    Reference:
    CFA Level I, Volume 4, Study Session 11, Reading 36, 63-64

    The break point on the marginal cost of capital schedule represents the point where the cost of one of the company's sources of capital changes and capital structure may experience deviations from the target capital structure.

70. A company executive is holding a meeting with members of the compensation committee. Together the individuals are attempting to devise a suitable compensation scheme for executive directors. One of the members proposes a stock dividend and cites two advantages of this form of compensation.

    Advantage 1: Issuing a stock dividend should help improve the debt-to-equity ratio as contributed capital will increase by the number of shares issued.

    Advantage 2: Stock dividends are generally not taxable to the shareholder.

    Which of the cited advantages is *most likely* correct?

    A. Both advantages.
    B. Advantage 1 only.
    C. Advantage 2 only.

    Correct Answer: C

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

Advantage 1 is incorrect; advantage 2 is correct. Issuing a stock dividend has no impact on a company's debt-to-equity ratio. This is because although retained earnings are reduced by the value of the stock dividends paid, contributed capital increases by the same amount resulting in a zero net impact on total shareholder's equity.

The payment of stock dividend does not impose any tax liability on the shareholders of a company; this is because shareholders are compensated in the form of shares as opposed to cash.

71. A senior executive at a company has identified that the average daily float associated with a company's bank account is \$223,460. The float factor is 1.790 while the number of days in the month of analysis is 30.

The total amount of deposits made by the company for the month is *closest* to:

A. \$13,333.
B. \$3,745,140.
C. \$11,999,802.

Correct Answer: B

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

Float factor = Average daily float ÷ (Total amount of checks deposited/Number of days)
1.790 = \$223,460 ÷ (Total number of checks deposited/30)
Total number of checks deposited = \$3,745,140

72. Which of the following factors *least likely* serves as a motivation for corporations engaging in share repurchases?

A. To provide company management with discretion in controlling their dividend policy.
B. To reduce the impact of a decline in EPS resulting from the exercise of employee stock options.
C. To communicate to the market that company management believes that a company's share is overvalued.

Correct Answer: C

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

One of the motivations for a company to engage in share repurchases is to communicate to the market that its management believes that its share is undervalued or simply to support share price.

Share repurchases can also be undertaken to mitigate the impact of a decline in EPS resulting from the exercise of employee stock options. Exercising employee stock options will increase the number of shares outstanding and decline earnings per share. On the other hand, share repurchases will decrease the number of shares outstanding thereby decreasing the net decline resulting from exercising options.

Unlike cash dividends, management need not commit to a policy of share repurchases. Therefore, with a share repurchase program, company management has greater flexibility with respect to the timing and amount of cash distributions to shareholders.

73. The exhibit below illustrates an accounts receivable aging schedule for a manufacturing concern.

Exhibit
Accounts Receivable Aging Schedule for a Manufacturing Concern

($ Millions)	January	February
Sales	550	650
Total accounts receivable	420	585
Current (1-30 days old)	220	200
1-30 days past due	100	234
31-60 days past due	56	90
61-90 days past due	30	45
>90 days past due	14	16

Which of the following scenarios is a suitable explanation for the changes observed in the aging schedule between January and February?

A. The percentage of cash sales has increased.
B. There is an increased likelihood of accounts becoming uncollectible.
C. The company has extended the credit terms offered to customers.

Correct Answer: C

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

By converting the aging to percentages, one can observe that the percentage of payments made after thirty days following the sales transaction date has increased from 47.6% [(100 + 56 + 30 + 14)/420] to 65.8% [(234 + 90 + 45 +16)/585]. The extension of credit terms could be a possible reason why customers are delaying their payments.
The percentage of accounts that are overdue has declined from 3.33% (14/420) in January to 2.74% (16/585) in February. Therefore the likelihood of accounts being uncollectable has, in fact, decreased.

The percentage of customers making cash payments on sales has declined from 23.6% [(550 – 420)/550] to 10.0% [(650 – 585)/650] indicating an increase in credit sales.

74. Which of the following corporate policies is *most* consistent with a strong corporate governance practices?

A. Restricting options repricing.
B. A significant portion of executive compensation is the basic salary.
C. Establishing a corporate fund to finance the medical treatment of a senior manager's family member.

Correct Answer: A

Reference:
CFA Level I, Volume 4, Study Session 11, Reading 40, LOS f

Option repricing, the repricing of stock options' strike prices downward, will remove the incentives created by the original options for management, thus reducing the link between long-term profitability and performance of the company with management remuneration. The policy of restricting option repricing is consistent with the code of ethics.

Executive compensation should be designed to align their interests with the long-term interests of shareholders. One way of achieving this is to increase the proportion of stock options, grants and bonuses while keeping the basic salary, which is fixed and has no incentive component, at a minimum.

A policy of lending or donating cash to insiders or their families constitutes a personal use of shareholder assets and is inconsistent with the code of ethics.

75. Dwight Enterprises is a manufacturing firm that plans to borrow $2 million to finance a three month project. The company would like to minimize borrowing costs; its financial officer has identified three alternative borrowing sources.

Alternative 1: Drawing down a line of credit at 4.50% with a 1% commitment fee on the full amount borrowed.

Alternative 2: A banker's acceptance at an all-in inclusive rate of 6.40%.

Alternative 3: Commercial paper at 4.0% with a dealer's commission of 1/9 percent and a backup line cost of 1/5 percent, both of which are assessed on the $2 million of commercial paper issued.

The financing cost associate with Alternative 1 is *closest* to:

A. 3.27%.
B. 4.13%.
C. 4.88%.

Correct Answer: B

Reference:
CFA Level I, Volume 4, Study Session 11, Reading 39, LOS g

Alternative 3 is the cheapest.

Cost (Alternative 1) = $\frac{(0.045 \times \$2{,}000{,}000 \times 3/12) + (0.01 \times \$2{,}000{,}000 \times 3/12)}{\$2{,}000{,}000} \times 3$= 0.04125 or 4.13%

76. A company situated in an emerging market has experienced two liquidity events during the most recent financial year.

Liquidity event 1: The company's bank has reduced its line of credit following a revised central bank policy.

Liquidity event 2: The company's inventory turnover ratio has considerably slowed from that observed over the previous years due to declining consumer purchase activity in the current inflationary environment.

Liquidity events 1 and 2 *most likely* represent:

	Liquidity Event 1:	Liquidity Event 2:
A.	pull on liquidity	drag on liquidity.
B.	pull on liquidity	pull on liquidity.
C.	drag on liquidity	pull on liquidity.

Correct Answer: C

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

Liquidity event 1 represents a drag on liquidity; this occurs when receipts lag creating pressure from the decreased available funds. Reducing a company's line of credit creates a liquidity squeeze.

Liquidity event 2 represents a pull on liquidity; this occurs when disbursements are paid too quickly or trade credit availability is limited. A slowing down of the inventory turnover ratio and sales volume may indicate potential obsolete inventory.

Questions 77 to 88 relate to Equity Investments

77. A portfolio manager has invested in a portfolio benchmarked to an equity index. He is primarily concerned with the substantial rebalancing costs which will need to be incurred to ensure index weights are maintained.

    The portfolio manager has *most likely* invested in a (n):

    A. price-weighted index.
    B. value-weighted index.
    C. equal-weighted index.

    Correct Answer: C

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

    Once an equally-weighted index is constructed, prices of constituent securities change so that the index is no longer equally weighted. Thus, maintaining equal weights requires constant rebalancing and incurring rebalancing costs.

78. Hedge funds:

    A. are heavily regulated.
    B. may suffer from survivorship bias.
    C. avoid the use of leverage in their investment strategies.

    Correct Answer: B

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

    Hedge funds use leverage as well as long and short positions. As unregulated entities they are not required to report their performance that may result in potential survivorship bias.

79. A portfolio manager has purchased \$2.5 million worth of equity investments for several of its client accounts. The purchase is financed using a combination of cash and equity. The manager must abide by a minimum margin requirement of 35%. Given the maintenance margin requirement, if the purchase price rises by 15%, the return on equity investment in the manager's leveraged position is *closest* to (ignoring interest costs and commission):

A. 5.25%.
B. 15.00%.
C. 42.86%.

Correct Answer: C

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

Maximum leverage ratio = 1 ÷ minimum margin requirement
= 1 ÷ 0.35
= 2.857

A 15% increase in the stock will result in a 0.42857 or 42.86% (2.857 × 0.15) return on the manager's leveraged equity investment.

80. The exhibit below illustrates the market's standing limit order book for the GlenCorp stock.

Exhibit:
Standing Limit Order Book
for GlenCorp Stock

Order Prices	
Bids	**Offers (Asks)**
	45
	44
	43
	42
37	
36	
35	
34	

Isaac Howler and Joanne Milken have each placed limit orders for the company's shares of stock. Howler has placed a limit buy order at a price of $43/share while Milken has placed a limit sell order at a price of $44/share.

The limit orders called by the two traders are *most likely* classified as:

	Howler	Milken
A.	behind the market order	standing limit order.
B.	standing limit order	marketable limit order.
C.	marketable limit order	behind the market order.

Correct Answer: C

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

The trade called by Howler is classified as a marketable limit order. The order is placed above the best offer ($42) and will generally completely or partially fill at the best offer price.

The trade called by Milken is classified as a behind the market order as it is placed above the best offer. The trade will not execute unless market prices rise. Traders call limit orders waiting to trade standing limit orders.

81. A trader purchased a share of stock at $40. Three months later the equity market is facing volatile performance. He suspects the stock price may fall by a minimum of 10%. The trader would like to minimize losses by ensuring the price falls by no more than 15% from its initial price.

The trader should *most likely*:

A. execute a good-till-cancelled (GTC) stop 36, limit 34.
B. execute a GTC, stop 34, market sell.
C. purchase a call option contract struck at 34.

Correct Answer: A

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

A stop limit order is more suitable for the trader relative to a stop market order. A GTC stop 34, market sell order will become valid when the price falls to $34 and will execute at the best available price even if that price is significantly lower than $34. On the other hand, a GTC stop 36 limit 34 will ensure that the selling price falls no lower than $34 (or by 15%).

A call option is typically used to limit losses on short positions. A put option with a strike of $34 will guarantee that the share will be sold at the aforementioned price.

82. An equity portfolio manager is purchasing technology stocks for his clients' portfolios. He believes the stock of a particular software house is undervalued at its current market price of AUD 130 and should be trading at AUD 180. However, he believes that there is a greater likelihood of the stock trading at AUD 180 if other traders are willing to buy it at a price above AUD 140.

In order to best take advantage of this information, the manager should issue a:

A. call option with a 180 AUD strike.
B. GTC, stop 140 AUD, market buy order.
C. GTC, stop 140 AUD, limit 180 AUD buy order.

Correct Answer: C

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

A GTC, stop 140 AUD, limit 180 AUD buy order will insure that the order to purchase the stock will become valid if the price rises above AUD 140. A 180 AUD limit order will help to avoid the possibility of trading at a price above 180 AUD and incurring a loss on the trade.

A call option is typically used to limit losses on a short position.

A GTC, stop 140 AUD market buy order is not appropriate because there is a possibility that the order is executed at a price higher than AUD 180. Market orders typically execute at the best available price; this price may not be the most suitable.

83. In the current financial year, a company has paid a dividend per share of $5. The company has always maintained a retention rate of 30% and expects to continue to do so in the long-run. The average return on equity is equal to 15%. The company's shareholders' required return on equity is 20%.

The company's justified price-to-earnings (P/E) ratio is *closest* to:

A. 3.16.
B. 4.52.
C. 7.78.

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 14, Reading 50, LOS h

Justified P/E = $\frac{P_0}{E_1} = \frac{D_1/E_1}{r-g**} = \frac{(1-0.30)*}{0.20-(0.30)(0.15)} = 4.52$

The payout ratio one year from now is equal to the current payout ratio, 70%, as stated in the case.

g** = (1 – dividend payout ratio)(return on equity)

84. Brock Limited is an asset management firm managing equity investments for numerous client accounts. The firm is intending to undertake an investment in the S&P 500 equity index. Details concerning the total index price level and income return over the two periods being analyzed has been summarized in the exhibit below. The initial index price level is 1,000.

Exhibit:
S&P 500 Index, Price Level and Income Return

	Period 1	Period 2
Total income return	1.0%	2.5%
Total price level	1,020	980

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

A. 1,015.00.
B. 1,015.37.
C. 1,035.15.

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 13, Reading 46, LOS e

Price return (Period 1) = (1,020/1,000) – 1 = 0.02 or 2%

Price return (Period 2) = (980/1,020) – 1 = - 0.0392 or – 3.92%

Total return (Period 1) = 2% + 1.0% = 3.0%

Total return (Period 2) = 2.5% - 3.92% = - 1.42%

Value of total return index (Period 2) = 1,000 × (1 + 3.0%) + (1 – 1.42%)
= 1,015.37

85. Sector indices:

A. classify securities based on market capitalization.
B. can be used as a tool for managerial performance analysis.
C. are classified based on a universally agreed upon sector classification method.

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 13, Reading 46, LOS h

Sector indices play an important role in performance appraisal because they provide a means to determine whether a particular portfolio manager is more successful at stock selection or sector allocation. Sector indices are organized into families with each index in a family representing an economic sector. However, the classification of economic sectors is not based on a universally agreed upon sector classification method as none exists.

86. Which of the following statements accurately characterizes the impact of time on difference in values between price and total return indexes?

A. The values of the two indexes will converge.
B. The value of the price return index will exceed the value of the total return index.
C. The value of the total return index will exceed the value of the price return index.

Correct Answer: C

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

With the passage of time, the value of the total return index will exceed the value of the price return index due to the reinvestment of dividends and/or interest income.

87. A security market index *most likely* represents:

A. a combination of asset classes.
B. a hypothetical portfolio of marketable securities.
C. a security market, market segment, or asset class.

Correct Answer: C

Reference:
CFA Level I, Volume 5, Study Session 13, Reading 46, LOS a

A security market index represents a security market, market segment, or asset class.

88. Fixed income indexes are *least likely* classified based on:

A. maturity.
B. type of issuer.
C. frequency of coupon payments.

Correct Answer: C

Reference:
CFA Level I, Volume 5, Study Session 13, Reading 46, LOS i

Fixed income indices can be classified on the dimensions of maturity or the type of issuer.

Questions 89 to 94 relate to Derivatives

89. When the present value of a commodity's storage costs exceeds the present value of its convenience yield benefits, then:

    A. the net cost of carry is negative and the commodity forward price will be higher than the spot price compounded at risk free rate.
    B. the net cost of carry is positive and the commodity forward price will be lower than the spot price compounded at risk free rate.
    C. the net cost of carry is negative and the commodity forward price will be lower than the spot price compounded at risk free rate.

    Correct Answer: A

    Reference:
    CFA Level 1, Volume 6, Study Session 17, Reading 58, LOS d

    When the present value of a commodity's storage cost exceeds the present value of its convenience yield benefits, then the net cost of carry is negative and the commodity forward price will be higher than the spot price compounded.

    Forward Price = Spot Price compounded at risk free rate – (negative cost of carry)

90. A trading is exploring arbitrage opportunities in the options market. European calls and puts with an exercise price of 65 expire in 150 days. The underlying is priced at 68 and makes no cash payments during the life of the options. The risk-free rate of interest is 4.0%. Call and put options are selling for 7 and 6 respectively.

    Based on the information provided, the trader will conclude that the call option is:

    A. overpriced.
    B. underpriced.
    C. fairly valued.

    Correct Answer: B

    Reference:
    CFA Level 1, Volume 6, Study Session 17, Reading 58, LOS l

Based on the put-call parity (see below), the call is underpriced as it is selling for 7 while the synthetic (intrinsic) value of the call is 10.04.

$$
\begin{aligned}
c_0 &= p_0 + S_0 - X/(1 + r)^T \\
&= 6 + 68 - 65/(1.04)^{150/365} \\
&= 10.04
\end{aligned}
$$

91. Lisa Martin is an equity analyst who is formulating a protective put strategy for put options on the DA Manufacturing stock. She has collected the relevant data in the exhibit below:

Exhibit:
Put Option Data for the Analysis of the DM Manufacturing Stock

Exercise price*	$50
Premium*	$6
Term-to-maturity	150 days
Underlying stock price at initiation	$58
Underlying stock price at expiration	$49
Risk-free rate	3.5%

*Otherwise identical call options on the manufacturer's stock are selling for $7.

The value of the protective put strategy at expiration of the puts is:

A. $0.
B. $56.
C. $58.

Correct Answer: C

Reference:
CFA Level 1, Volume 6, Study Session 17, Reading 59, LOS b

The protective put strategy comprises of the purchase of a put option and the underlying asset.

Since the price of the underlying at expiration ($49) is less than the option exercise price ($58), the put expires and is worth $9 ($58 – $49) and the underlying is worth $49. Thus, the value of strategy is equal to $58 ($58 – $49 + $49).

Value at expiration when $S_T \leq X = \$49$

92. Over-the-counter and exchange-listed options differ in terms of:

    A. moneyness of options.
    B. credit risk faced by the option holder.
    C. the proportion of premium paid relative to exercise price.

Correct Answer: B

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

Over-the-counter differ from exchange-listed options in that option holders (buyers) face credit risk with respect to the former. However, exchange traded options trade on standardized exchanges with the clearinghouse serving as counterparty to each transaction. Defaults are rare with the clearinghouse always being successful in paying when the seller defaults; therefore, option holders do not face counterparty credit risk.

93. Which of the following accurately describes the profit to the call option seller?

    A. $\prod = \text{Max}(0, S_T - X) - c_o$
    B. $\prod = -\text{Max}(0, X - S_T) + c_o$
    C. $\prod = -\text{Max}(0, S_T - X) + c_o$

Correct Answer: C

Reference:
CFA Level 1, Volume 6, Study Session 17, Reading 57, LOS c

Profit to the call seller = $\prod = -\text{Max}(0, S_T - X) + c_o$

94. Unlike forward contracts and swaps, futures:

    A. cannot be traded over-the-counter.
    B. are associated with zero default risk.
    C. have a non-zero contract value at initiation.

Correct Answer: A

Reference:
CFA Level 1, Volume 6, Study Session 17, Reading 57, LOS c

Unlike forward contracts and swaps, futures contracts are typically traded on standardized, established exchanges suggesting that they are not traded in over-the-counter markets.

Although the risk of default is relatively lower due to the daily settlement of gains and losses, this does not mean that futures have zero default risk.

Futures, forwards and swaps all have zero contract values at contract initiation.

Questions 95 to 106 relate to Fixed Income

95. A share repurchase agreement with a highly rated, short in supply, sovereign bond as collateral is associated with:

    A. a low repo rate.
    B. zero default risk.
    C. a high repo margin.

    Correct Answer: A

    Reference:
    CFA Level I, Volume 5, Study Session 15, Reading 52, LOS g

    Repo rates are lower for highly rated collaterals such as highly rated sovereign bonds. Credit risk is present in a repurchase agreement even if the collateral is a highly rated sovereign bond. Repo margins are lower if the collateral is short in supply and is of high quality.

96. A 181-day Treasury bill has a face value of $10.000 million and a present value of $9.129 million. Assuming a 360-day year, the instrument's discount rate is *closest* to:

    A. 4.49%.
    B. 15.53%.
    C. 16.85%.

    Correct Answer: B

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

    Discount rate = $\frac{Year}{Days} \times \left[\frac{FV-PV}{FV}\right]$

    $= \frac{360}{181} \times \left[\frac{\$10{,}000.000-\$9{,}219{,}000}{\$10{,}000{,}000}\right] = 15.53\%$

97. A floating rate note (FRN) has a par value of $1,000 and makes semi-annual interest payments on June and December at the six-month LIBOR plus spread of 200 basis points. On the date the instrument was issued (January 1, 2012), the six-month LIBOR was 4.5%. In June 2012, LIBOR increased to 5.0% and declined in December 2012 to 3.5%.

Which of the following statements is *most likely* correct with respect to the interest payments due on the FRN?

A. The coupon interest due in June 2012 amounts to $32.50.
B. The coupon interest due in June 2012 amounts to $35.00.
C. The coupon interest due in December 2012 amounts to $42.50.

Correct Answer: A

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

To calculate the coupon interest payment owed on a FRN on a particular date, the prior six-month LIBOR rate should be used.

Coupon interest payment due in June 2012 = [(4.5% + 2%)/2] × $1,000 = $32.50

Coupon interest payment due in December 2012 = [(5.0% + 2%)/2] × $1,000 = $35.00

98. A dual currency bond:

A. is viewed as a combination of a single currency bond and foreign currency option.
B. makes coupon payments in one currency and principal payments in another currency.
C. makes coupon payments in one foreign currency and principal payments in another foreign currency.

Correct Answer: B

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

A dual currency bond makes coupon payments in one currency and principal payments in another currency. One currency may be domestic and the other foreign or both foreign.
Currency option bonds are viewed as a combination of a single-currency bond plus a foreign currency option.

99. Three months ago, a steel manufacturer sold a 5% bond issue with a face value of £1,000 and redemption yield of 5%. The bond will be maturing in ten months' time.

The issue is *most likely* classified as a:

A. pure discount bond.
B. capital market security.
C. money market security.

Correct Answer: B

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

The issue is classified as a capital market security as the original maturity is 13 (10 +3) months.

The issue is not a pure discount bond since it is issued as its face value (see below).

N = 13; I/Y = 5; PMT = 50; FV = 1,000; (CPT) PV = 1,000

Money market securities have an original maturity (at issuance) of less than one year.

100. A software house issued a 25-year bond issue at a price of 101.20 on January 1, 2013 (stated as a percentage of par). The par value of each bond in the issue is \$1,000. The bond will be callable every January 1st starting from the year 2020 at the option of the issuer.

The callable bond has an embedded:

A. American option.
B. European option.
C. Bermuda-style option.

Correct Answer: C

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

The callable bond has an embedded Bermuda-style call. These options give the issuer the right to call the bonds on specified dates following the call protection period. In the case of the 25-year bond issue, the protection period ends in the year 2020.

101. Affirmative covenants will require the issuer to:

A. use bond proceeds in a particular manner.
B. maintain minimum acceptable interest coverage ratios.
C. limit the assets that can be disposed off during the bond’s life.

Correct Answer: A

Reference:
CFA Level I, Study Session 15, Reading 51, LOS c

Affirmative covenants are typically administrative in nature. They include promises by the issuer to employ bond proceeds in a particular manner.

Negative covenants constrain the issuer’s potential business decisions. The purpose of negative covenants is to protect bondholders from such actions such as the dilution of claims and so forth. Examples of these types of covenants include requiring the issuer to maintain a minimum acceptable interest coverage ratio and limiting the assets that can be disposed off during the bond’s life.

102. An investor would like to invest in a security that offers inflation protection for both interest and principal repayments. Which of the following bond structures is *most* suitable for this investor?

A. Capital-indexed bond
B. Credit-linked coupon bond
C. Zero-coupon-indexed bond

Correct Answer: A
Reference: CFA Level I, Volume 5, Study Session 15, Reading 51, LOS e

Capital-indexed bonds pay a fixed coupon rate that is applied to a principal amount that increases in line with the increases in the index during the bond's life. Both interest and principal repayments are adjusted for inflation.

Credit-linked coupon bonds provide protection against credit risk and some general protection against a poor economy since credit ratings tend to decline during economic downturns.

Zero-coupon-indexed bond do not pay coupon; thus, inflation adjustment is made via the principal repayment only.

103. A convertible bond issue has a conversion premium of $50 at a time when the underlying share's price is $35. The convertible has a par value of $1,000 and is convertible into 80 shares of the issuer's stock.

The convertible bond's price is *closest* to:

A. $1,050.
B. $2,750.
C. $2,850.

Correct Answer: C

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

Conversion premium = Bond's price – conversion value
Conversion value = Current share price × conversion ratio
Conversion value = $35 × 80 = $2,800
Bond's price = $50 + $2,800 = $2,850

104. Which of the following primary market mechanisms can be employed by an issuer desiring to spread the issue over a series of time intervals without having to prepare a separate offering circular for each bond issue?

A. Auctions
B. Shelf registration
C. Underwritten offerings

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 15, Reading 52, LOS c

A shelf registration allows authorized issuers to offer additional bonds to the general public without having to prepare a new and separate offering circular for each bond issue. Instead the issuer prepares a single, all-encompassing offering circular for each bond issue.

105. The primary market mechanism used to offer unregistered bonds without an underwriting to a large institutional investor is *most likely*:

A. the grey market.
B. a private placement.
C. a firm commitment offering.

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 15, Reading 52, LOS c

A private placement is a primary market mechanism whereby a non-underwritten, unregistered offering of bonds are sold to an investor or a group of investors, such as a large institutional investor.

A firm commitment offering entails an underwritten offering of bonds. The grey market is a forward market for bonds that are to be issued.

106. A 10%, five-year corporate bond issue with a par value of $1,000 pays coupon on a semi-annual basis. The market discount rate at the time of the issue was 12% and has remained unchanged.

Which of the following facts is *most likely* correct regarding the bond issue?

A. The bond is priced at par.
B. The bond is selling at a price below par.
C. The bond offers an excessive coupon rate.

Correct Answer: B

Reference:
CFA Level I, Volume 5, Study Session 15, Reading 53, LOS a

Given the price of the bond, $926.40 (calculated below), the bond is selling at a discount to par offering a low coupon rate.

N = 5 × 2 = 10

I/Y = 12/2 = 6

PMT = 100/2 = 50

FV = 1,000

CPT PV = 926.40

Questions 107 to 112 relate to Alternative Investments

107. An analyst has gathered some information about businesses in a foreign economy. The exhibit below displays data about the firms operating there.

Exhibit

	Fair Value (Dec 31 2009)	Liquidation Value (April 30 2010)
Firm A	$150 million	$60 million
Firm B	$175 million	$100 million
Firm C	$320 million	$90 million

Based on the information above, the economy is likely to:

A. have entered a business cycle low.
B. achieve abnormal growth in the near future.
C. experience an increase in the number of companies reporting at fair value.

Correct Answer: A

Reference:
CFA Level 1, Volume 6, Study Session 18, Reading 60, LOS g

In a weak economic environment, liquidation values will most likely be far lower than the immediately previous fair values because there will be many assets for sale but few buyers.

108. For most private equity funds:

A. management fees generally range from 20-30 percent of the committed capital.
B. Limited partners (LPs) do not earn incentive fee until general partner (GP) have received their initial investment back.
C. General partner (GP) does not earn incentive fee until limited partners (LPs) have received their initial investment back.

Correct Answer: C

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

For most private equity funds, GP does not earn an incentive fee until the LPs have received their initial investment back.

Management fees generally range from 1-3 percent of the committed capital.

109. A commodity futures market is said to be in backwardation if:

A. the convenience yield is high.
B. there are little to no convenience yields.
C. futures prices are higher than spot prices.

Correct Answer: A

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

A commodity futures market is in backwardation when the convenience yield is high and futures prices are lower than spot prices. Commodity futures markets are in contango when there are little to no convenience yields.

110. An investor would like to invest in a real estate asset class which provides a relatively predictable income stream and has the obligation to distribute the majority of its income to owners. The investor should *most likely* select:

A. Timberland.
B. Equity REITs.
C. Residential property

Correct Answer: B

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

Equity REITs have the obligation to distribute the majority of their income to shareholders (owners) and provide a relatively stable rental income stream.

111. Neil Ortega is seeking to invest in an alternative investment asset class with the following properties:

- Liquid
- High return potential
- Diversification potential
- Inflation hedge

Ortega will *most likely* invest in:

A. apartments.
B. funds of hedge funds.
C. commodity derivatives.

Correct Answer: C

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

Commodities offer the potential for returns, low correlations with other asset classes (potential for diversification), inflation protection, and are relatively liquid.

One of the major risks associated with investing in apartments (real estate) is that the investment may be potentially illiquid despite the rentals on apartments providing an inflation hedge in addition to diversification and return potential.

Despite providing more liquidity relative to their underlying funds, diversification and return potential, funds of hedge funds are not known for providing inflation protection.

112. Gabrielle Hope invests \$250,000 in Bacca Fund, a fund of hedge funds with which a "4 and 12" fee structure. Management and incentive fees are calculated independently at the end of each year. One of Bracca Fund's investments is the Torp fund, which has generated a fund value, net of its respective management and incentive fees, of \$320,000 at the end of the first year. The annual return to an investor in Bacca, net of management and incentive fees, is *closest* to:

A. 7.5%.
B. 19.5%.
C. 28.0%.

Correct Answer: B

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

Management fee = \$320,000 × 4% = \$12,800

Incentive fee = (\$320,000 – \$250,000) × 0.12 = \$8,400

Total fees to Bacca = \$12,800 + \$8,400 = \$21,200

Investor net return = (\$320,000 – \$250,000 – \$21,200)/\$250,000 = 19.52%

Questions 113 to 120 relate to Portfolio Management

113. The set of exposures to IPS-permissible asset classes that is expected to achieve the client's long term objectives given the client's investment constraints is *most likely* referred to as:

    A. tactical asset allocation.
    B. systematic risk exposure.
    C. strategic asset allocation.

    Correct Answer: C

    Reference:
    CFA Level I, Volume 4, Study Session 12, Reading 44, LOS-f.

    The strategic asset allocation (SSA) is the set of exposures to IPS-permissible asset classes that is expected to achieve the client's long term objectives given the client's investment constraints

114. A Muslim investor prohibit his investment manager from investing in businesses related to gambling and alcohol. In preparing investment policy statement of the investor, this prohibition will *most likely* be included in:

    A. risk and return objectives.
    B. legal and regulatory factors.
    C. unique needs and circumstances.

    Correct Answer: C

    Reference:
    CFA Level I, Volume 4, Study Session 12, Reading 44, LOS-b.

    Prohibition of investor from investing in certain types of businesses or companies whether rooted in religious beliefs or personal objections to certain products are discussed in "Unique circumstance" of the investment policy statement.

115. If short selling is allowed, an asset plotted above the security market line should *most likely* be:

   A. sold.
   B. sold short.
   C. purchased.

Correct Answer: C

Reference:
CFA Level I, Volume 4, Study Session 12, Reading 43, LOS-f.

Estimated return of an asset plotted above the SML indicates that asset is undervalued and that asset should be purchased.

116. A higher return investment is more desirable even with higher risk if the investor is:

   A. rational.
   B. risk averse.
   C. risk neutral.

Correct Answer: C

Reference:
CFA Level I, Volume 4, Study Session 12, Reading 42, LOS-f.

If an investor is risk neutral, he will care only about return and not about risk therefore the higher return investments are more desirable even if they come with higher risk.

117. Which of the following features *most likely* distinguishes ETFs from index mutual funds?

   A. Dividend reinvestments
   B. Ownership rights of fund assets
   C. Underlying securities held by the fund

Correct Answer: A

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

One difference between a mutual fund and ETF is that the former usually reinvests dividends whereas the latter pays out dividends.

118. Christopher Fugate, CFA, is a portfolio manager at Sunny Brooks. He is managing the investment portfolio of Ralph McKenzie which comprises of an allocation to small-cap equity stocks and real estate. The expected return and standard deviation of the two asset classes are illustrated in the exhibit below. The correlation between the two asset classes is 0.02.

Exhibit:
Asset Classes Comprising McKenzie's Investment Portfolio

	Expected Annual Return (%)	Standard Deviation of Return (%)
Real estate	18.0	12.3
Small-cap equities	6.5	4.7

If McKenzie requires a portfolio return of 10%, the proportions invested in each asset class should, respectively, be *closest* to:

	Real estate (%):	Small-cap equities (%):
A.	30.4	69.6.
B.	50.0	50.0.
C.	73.5	26.5.

Correct Answer: A

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

$R_P = w_1R_1 + (1 – w_1)R_2$
$10.0 = (w_1)(18.0) + (1 – w_1)(6.5)$
$10.0 = 18.0w_1 + 6.5 – 6.5w_1$
$3.5 = 11.5w_1$
$w_1 = 30.43\%$

Thus, the real estate and small-cap equities should be held in the proportions 30.43% and 69.56% (1 – 0.3043) respectively.

119. A portfolio manager is exploring equity securities for an investor's portfolio. Based on his observations, the investment manager concludes that stock returns are often negatively skewed.

Which of the following statements *most* accurately illustrates the implications of an asset class with negatively returns?

A. Portfolio standard deviation will be overestimated.
B. There is a higher than normal probability for extreme returns.
C. A majority of the return observations are concentrated to the left of the mean.

Correct Answer: A

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

A return distribution is negatively skewed if returns are not symmetric around the mean and most of the returns fall to the right of the mean. A negatively skewed distribution has a higher frequency of negative deviations from the mean, which has the effect of overestimating standard deviation.

Kurtosis refers to fat tails or higher than normal probabilities for extreme returns.

120. In contrast to the arithmetic mean return, the internal rate of return (IRR):

A. accounts for the time value of money.
B. reflects a buy-and-hold investment strategy.
C. reflects a constant dollar investment at the beginning of each period.

Correct Answer: A

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

The arithmetic mean return represents the simple average of all holding period returns. Unlike the IRR this return measure fails to consider the time value of money.

The geometric mean return reflects a buy-and-hold strategy by assuming that the investment amount is not reset at the beginning of each period.

The arithmetic mean return reflects a constant dollar investment at the beginning of each time period.