



CFA® Program Level I

Multiple choice sample questions



The CFA® Program

The Chartered Financial Analyst (CFA®) Program is designed to equip candidates with the knowledge and skills necessary to compete and excel in today's complex and evolving investment industry.

It is a self-study, three-level exam that tests the fundamentals of investment tools, company valuation, portfolio management, and wealth planning. Whether an individual is an aspiring or practicing investment professional, the CFA Program offers a way to move forward and achieve professional goals.

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ETHICAL AND PROFESSIONAL STANDARDS

Question 1

Which of the following statements is most accurate? Ethics can be described as:

- A. a commitment to upholding the law
- B. an individual's personal opinion about right and wrong.
- C. a set of moral principles that provide guidance for our behavior

Solution: C is correct. Ethics can be described as a set of moral principles that provide guidance for our behavior; these may be moral principles shared by a community or societal group.

Question 2

Which of the following statements is most accurate? Investment professionals have a special responsibility to act ethically because:

- A. the industry is heavily regulated
- B. they are entrusted to protect clients' assets
- C. the profession requires compliance with its code of ethics

Solution: B is correct. Investment professionals have a special responsibility because clients entrust them to protect the clients' assets.

Question 3

Stewart has been hired by Goodner Industries, Inc., to manage its pension fund. Stewart's duty of loyalty, prudence, and care is owed to:

- A. the management of Goodner
- B. the participants and beneficiaries of Goodner's pension plan
- C. the shareholders of Goodner

Solution: B is correct. Under Standard III(A) Loyalty, Prudence, and Care, members and candidates who manage a company's pension fund owe these duties to the participants and beneficiaries of the pension plan, not the management of the company or the company's shareholders.

QUANTITATIVE METHODS

Question 4

An investor purchased 100 shares of a stock for USD34.50 per share at the beginning of the quarter. If the investor sold all of the shares for USD30.50 per share after receiving a USD51.55 dividend payment at the end of the quarter, the investor's holding period return is closest to:

- A. -13.0 percent
- B. -11.6 percent
- C. -10.1 percent

Solution: C is correct. C is correct. Applying Equation 2, the holding period return is -10.1 percent, calculated as follows:

$R = (3,050 - 3,450 + 51.55)/3,450 = -10.1\%$. The holding period return comprised of a dividend yield of 1.49 percent ($=51.55/3,450$) and a capital loss of -11.59 percent ($= -400/3,450$).

Question 5

An investor seeks a fixed-rate 30-year mortgage loan to finance 80 percent of the purchase price of USD1,000,000 for a residential building. 1. Calculate the investor's monthly payment if the annual mortgage rate is 5.25 percent.

Solution: Solve for A using Equation 8 with $r = 0.4375\%$ ($= 5.25\%/12$), t of 360, and PV of USD800,000 ($=80\% \times \text{USD1,000,000}$):

$$A = \text{USD}4,417.63 = \frac{0.4375\% (\text{USD}800,000)}{1 - (1 + 0.4375\%)^{-360}}$$

The 360 level monthly payments consist of both principal and interest.

Question 6

Which of the following statements is true in the use of Machine Learning (ML):

- A. some techniques are termed "black box" due to data biases
- B. human judgment is not needed because algorithms continuously learn from data
- C. training data can be learned too precisely, resulting in inaccurate predictions when used with different datasets

Solution: C is correct. Overfitting occurs when the ML model learns the input and target dataset too precisely. In this case, the model has been “overtrained” on the data and is treating noise in the data as true parameters. An ML model that has been overfitted is not able to accurately predict outcomes using a different dataset and might be too complex.

ECONOMICS

Question 7

A company has total variable costs of \$4 million and fixed costs of \$3 million. Based on this information, the company will stay in the market in the long term if total revenue is at least:

- A. \$3.0 million
- B. \$4.5 million
- C. \$7.0 million

Solution: C is correct. A company will stay in the market in the long term if total revenue is equal to or greater than total cost. Because total costs are \$7 million (\$4 million variable costs and \$3 million fixed costs), the company will stay in the market in the long term if total revenue equals at least \$7 million.

Question 8

Which of the following statements regarding a country's political cooperation is most accurate?

- A. If a country is engaged in military conflict, there is a higher cost to cooperation
- B. A country with few internal resources is not likely to rely on political cooperation
- C. Interest prioritization does not determine the depth and nature of political cooperation

Solution: A is correct. If a country is engaged in military conflict, there is a higher cost to cooperation.

B is incorrect because a country with few internal resources is likely to rely on political cooperation.

C is incorrect because interest prioritization does determine the depth and nature of political Cooperation.

Question 9

An executive from Switzerland checks into a hotel room in Spain and is told by the manager that EUR1 will buy CHF1.2983. From the executive's perspective, an indirect exchange rate quote would be:

- A. EUR0.7702 per CHF1
- B. CHF0.7702 per EUR1
- C. EUR1.2983 per CHF1

Solution: A is correct. An indirect quote takes the foreign country as the price currency and the domestic country as the base currency. To get Swiss francs—which is the executive's domestic currency—as the base currency, the quote must be stated as EUR/CHF. Using the manager's information, the indirect exchange rate is $(1/1.2983) = 0.7702$.

CORPORATE ISSUERS

Question 10

Which of the following organizational forms provides for the least owner liability of business debts?

- A. General partnership
- B. Private limited company
- C. Sole proprietorship

Solution: B is correct. In both the sole proprietorship and general partnership forms of organization, the owners are personally liable for all debts assumed by the company. In a private limited company, owner (shareholder) liability is limited to the value of their ownership stake.

Question 11

Keown Corporation is experiencing liquidity challenges. As an analyst, you note three recent trends related to Keown's working capital:

1. An increase in average days sales outstanding is a drag on liquidity
2. An increase in days of inventory on hand is a drag on liquidity
3. An increase in credit limits by lenders is a pull on liquidity

Solution: C is correct. The increase in credit limits is not a pull on liquidity but is in fact the opposite: it provides liquidity.

A is incorrect, because an increase in days sales outstanding is a drag on liquidity as it results in slower or delayed cash inflows.

B is incorrect, because higher days of inventory on hand is a drag on liquidity as it extends the cash conversion cycle.

Question 12

Which trend does not contribute to the firm's liquidity challenges?

- A. The change in average days sales outstanding
- B. The change in days of inventory on hand
- C. The change in credit limits

Solution: C is correct: The increase in credit limits is not a pull on liquidity but is in fact the opposite: it provides liquidity.

A is incorrect, because an increase in days sales outstanding is a drag on liquidity as it results in slower or delayed cash inflows.

B is incorrect, because higher days of inventory on hand is a drag on liquidity as it extends the cash conversion cycle.

FINANCIAL STATEMENT ANALYSIS

Question 13

For its fiscal year-end, Sublyme Corporation reported net income of USD200 million and a weighted average of 50,000,000 common shares outstanding. There are 2,000,000 convertible preferred shares outstanding that paid an annual dividend of USD5. Each preferred share is convertible into two shares of the common stock. The diluted EPS is closest to:

- A. USD3.52
- B. USD3.65
- C. USD3.70

Solution: Diluted EPS = (Net income)/(Weighted average number of shares outstanding + New common shares that would have been issued at conversion) = $\text{USD}200,000,000 / [50,000,000 + (2,000,000 \times 2)] = \text{USD}3.70$

The diluted EPS assumes that the preferred dividend is not paid and that the shares are converted at the beginning of the period.

Question 14

Eric's Used Book Store prepares its financial statements in accordance with IFRS. later marked down to GBP550,000. One of the books, however, was later discovered to be a rare collectible item, and the inventory is now worth an estimated GBP3 million. The inventory is most likely reported on the balance sheet at:

- A. GBP550,000
- B. GBP1,000,000
- C. GBP3,000,000

Solution: B is correct: Under IFRS, the reversal of write-downs is required if net realizable value increases. The inventory will be reported on the balance sheet at GBP1,000,000. The inventory is reported at the lower of cost or net realizable value

Question 15

In the current year, Michaels Company has a carrying amount of USD3,500,000 and tax base of USD5,000,000 for accounts receivable. Michaels will most likely recognize:

- A. a deferred tax asset.
- B. a deferred tax liability.
- C. no deferred tax asset or liability.

Solution: A is correct. Because the carrying amount is less than the tax base for this asset, this difference is a temporary difference that will result in a deferred tax asset.

B is incorrect because a deferred tax liability would apply if the carrying amount was greater than the asset base.

C is incorrect because this is not a permanent difference thus there will be either a deferred tax asset or deferred tax liability.

EQUITY INVESTMENTS

Question 16

Which of the following statements about exchange-traded funds is most correct?

- A. Exchange-traded funds are not backed by any assets
- B. The investment companies that create exchange-traded funds are financial intermediaries
- C. The transaction costs of trading shares of exchange-traded funds are substantially greater than the combined costs of trading the underlying assets of the fund

Solution: B is correct. The investment companies that create exchange-traded funds (ETFs) are financial intermediaries. ETFs are securities that represent ownership in the assets held by the fund. The transaction costs of trading shares of ETFs are substantially lower than the combined costs of trading the underlying assets of the ETF.

Question 17

Security market indexes are:

- A. constructed and managed like a portfolio of securities
- B. simple interchangeable tools for measuring the returns of different asset classes
- C. valued on a regular basis using the actual market prices of the constituent securities

Solution: A is correct. Security market indexes are constructed and managed like a portfolio of securities.

Question 18

With respect to the efficient market hypothesis, if security prices reflect only past prices and trading volume information, then the market is:

- A. weak-form efficient
- B. strong-form efficient
- C. semi-strong-form efficient

Solution: A is correct. The weak-form efficient market hypothesis is defined as a market where security prices fully reflect all market data, which refers to all past price and trading volume information.

FIXED INCOME

Question 19

Assume that today ($t = 0$) the current US five-year Treasury note trades at a price equal to the bond's face value of USD50,000,000. The security buyer takes delivery of the US Treasury note today and pays the security seller USD50,000,000.

Assume a repo term of 45 days (and 360 days in a year) and a repo rate of 0.375%. If the buyer agrees to return the five-year Treasury note 45 days from today ($t = T$) to the seller, the repurchase price is closest to:

- A. USD50,015,625
- B. USD50,023,438
- C. USD50,187,500

Solution: B is correct. USD50,023,438 is calculated as: $\text{USD50,000,000} \times [1 + (0.375\% \times 45/360)] = \text{USD50,023,438}$. In effect, the security seller borrows USD50,000,000 on a short-term basis at a low cost, with interest (USD23,438) paid at maturity, because the loan is collateralized by the US Treasury note.

A is incorrect because a repo term of 30 days, as opposed to 45 days, is incorrectly used:

$$\text{USD50,000,000} \times [1 + (0.375\% \times 30/360)] = \text{USD50,015,625}.$$

C is incorrect because the repo term and number of days in a year are not used:

$$\text{USD50,000,000} \times (1 + 0.375\%) = \text{USD50,187,500}.$$

Question 20

Exceptions to the maturity effect exist for bonds that have:

- A. long maturities, make small coupon payments, and trade at a discount.
- B. short maturities, have high coupon rates, and trade at a discount.
- C. long maturities, have high coupon rates, and trade at a premium.

Solution: A is correct. Exceptions to the maturity effect are rare and occur only for low-coupon (but not zero-coupon) long-term bonds trading at a discount.

B is incorrect because the maturity effect holds for bonds that have short maturities and high coupons.

C is incorrect because the maturity effect always holds on bonds priced at a premium above par value.

Question 21

Which of the following statements regarding securitized products is correct?

- A. Credit tranching offers credit protection for the equity tranche in a securitization.
- B. Pass-through securities are the simplest securitized structure and involve issuers retaining the underlying assets.
- C. In a true securitization, the underlying pool of assets is removed from the balance sheet and transferred into

Solution: The correct answer is C. In a true securitization, the specific pool of assets is removed from the balance sheet and transferred into a separate and independent legal entity that then issues securities backed by these pooled assets.

A is incorrect because credit tranching offers credit protection for the more senior bond classes in a securitization not the equity tranche.

B is incorrect because covered bonds, not pass-through securities, are the simplest securitization structure, which involves the issuer retaining the underlying assets on its balance sheet.

DERIVATIVES

Question 22

If a corporate issuer enters into a centrally cleared OTC derivative contract, which of the following risks is likely of most concern to the issuer and other participants in this market?

- A. Interest rate risk
- B. Counterparty credit risk
- C. Systemic risk

Solution: C is correct. Because all the credit risk is taken on by the CCP, all participants in this market are most concerned that the CCP is able to satisfy its obligations to all contracts.

A is incorrect because interest rate risk is an underlying risk that can be hedged or managed with certain OTC derivative contracts.

B is incorrect because the CCP assumes the credit risk from all parties to the contracts.

Question 23

Which of the following responses is closest to the one-year futures price of a stock with a spot price (S_0) of €125 and an annual dividend of €2.50 paid at maturity if the risk-free rate is 1%?

- A. €123.75
- B. €122.50
- C. €126.25

Solution: A is correct. The no arbitrage futures price for an underlying asset with known benefits, such as a dividend, may be determined using the following equation:

$$f_0(T) = [S_0 - PV_0(I)] (1 + r)^T.$$

First, solve for the present value of the dividend $PV_0(I)$ as follows:

$$€2.48 = (€2.50 / 1.01).$$

Substitute $PV_0(I)$ into the original equation to solve for $f_0(T)$: $f_0(T) = €123.75 = (€125 - €2.48)(1.01)$.

Question 24

Which of the following statements best describes a shareholder's claim in terms of an option payoff?

- A. Shareholder payoff resembles the payoff of a put option on firm value.
- B. Shareholder payoff resembles the payoff of a covered call option on firm value.
- C. Shareholder payoff resembles the payoff of a call option on firm value.

Solution: C is correct. When considering shareholder claims in option terms, the shareholder payoff resembles a call option on firm value.

ALTERNATIVE INVESTMENTS

Question 25

Which of the following statements most correctly describes why commodity investments are thought to provide a hedge against inflation?

- A. The returns on commodity investing are driven by commodity price changes, and inflation partially reflects these changes.
- B. Commodity prices increase after inflation rates increase.
- C. Expectations of higher inflation cause commodity prices to increase.

Solution: A is correct. Commodity prices are a significant portion of consumer prices because commodities include aspects of everyday life, such as food and energy, and thus consumer price inflation will incorporate the effects of commodity price changes. By investing in commodities, an investor is, at least partially, hedged against the inflation that occurs with rising commodity prices.

B is incorrect because inflation and commodity prices do not move together, but instead, changes in the inflation rate lag behind changes in commodity prices.

C is incorrect because in this case, commodity price increases occur before inflation changes.

Question 26

A fundamental long/short hedge fund manager is evaluating specific securities to build a portfolio's positions. Which of the following is the strategy the manager would least likely adopt?

- A. Long securities that have an upside potential relative to current price
- B. Short sectors with macro trends negatively impacting the company
- C. Long securities that trade at a significant discount, expecting an increased valuation in case of a bankruptcy

Solution: C is correct. Participating in a potential bankruptcy situation would be characteristic of an event-driven hedge fund manager and not a fundamental long/short manager.

B is incorrect because a fundamental long/short manager would invest in securities expected to exhibit high growth and capital appreciation.

C is incorrect because a fundamental long/short manager would short securities in sectors that project negative growth.

Question 27

A cryptocurrency miner can earn new digital assets by:

- A. solving complex algorithm puzzles to validate blocks of transactions onto a blockchain network based on a PoS protocol.
- B. staking his own cryptocurrencies to validate blocks of transactions onto a blockchain network based on a PoW protocol.

C. validating and locking transactions onto a blockchain irrespective of the consensus protocol adopted by the particular network.

Solution: C is correct. Under both PoW and PoS consensus protocols, the validation of the transactions, or "mining," always comes with rewards. A successful miner that validates the transactions obtains new digital assets—either a cryptocurrency or a token. For blockchain networks based on the PoW protocol, the miner earns his digital assets by solving complex algorithm puzzles to validate blocks of transactions onto a blockchain network. For blockchain networks based on the PoS protocol, the miner earns his digital assets by staking his own to validate and attest to the new blocks of transactions.

PORTFOLIO MANAGEMENT

Question 28

With respect to the portfolio management process, the asset allocation is determined in the:

- A. planning step.
- B. feedback step.
- C. execution step.

Solution: C is correct. The client's objectives and constraints are established in the investment policy statement and are used to determine the client's target asset allocation, which occurs in the execution step of the portfolio management process.

Question 29

A client who is a director of a publicly listed corporation is required by law to refrain from trading that company's stock at certain points of the year when disclosure of financial results are pending. In preparing a written investment policy statement (IPS) for this client, this restriction on trading:

- A. is irrelevant to the IPS.
- B. should be included in the IPS.
- C. makes it illegal for the portfolio manager to work with this client.

Solution: B is correct. When a client has a restriction in trading, such as this obligation to refrain from trading, the IPS "should note this constraint so that the portfolio manager does not inadvertently trade the stock on the client's behalf."

Question 30

A client who is a director of a publicly listed corporation is required by law to refrain from trading that company's stock at certain points of the year when disclosure of financial results are pending. In preparing a written investment policy statement (IPS) for this client, this restriction on trading:

- A. risk tolerance, then risk budgeting, and then risk exposures.
- B. risk exposures, then risk tolerance, and then risk budgeting.
- C. risk budgeting, then risk exposures, and then risk tolerance.

Solution: A is correct. In establishing a risk management system, determining risk tolerance must happen before specific risks can be accepted or reduced. Risk tolerance defines the appetite for risk. Risk budgeting determine how or where the risk is taken and quantifies the tolerable risk by specific metrics. Risk exposures can then be measured and compared against the acceptable risk.