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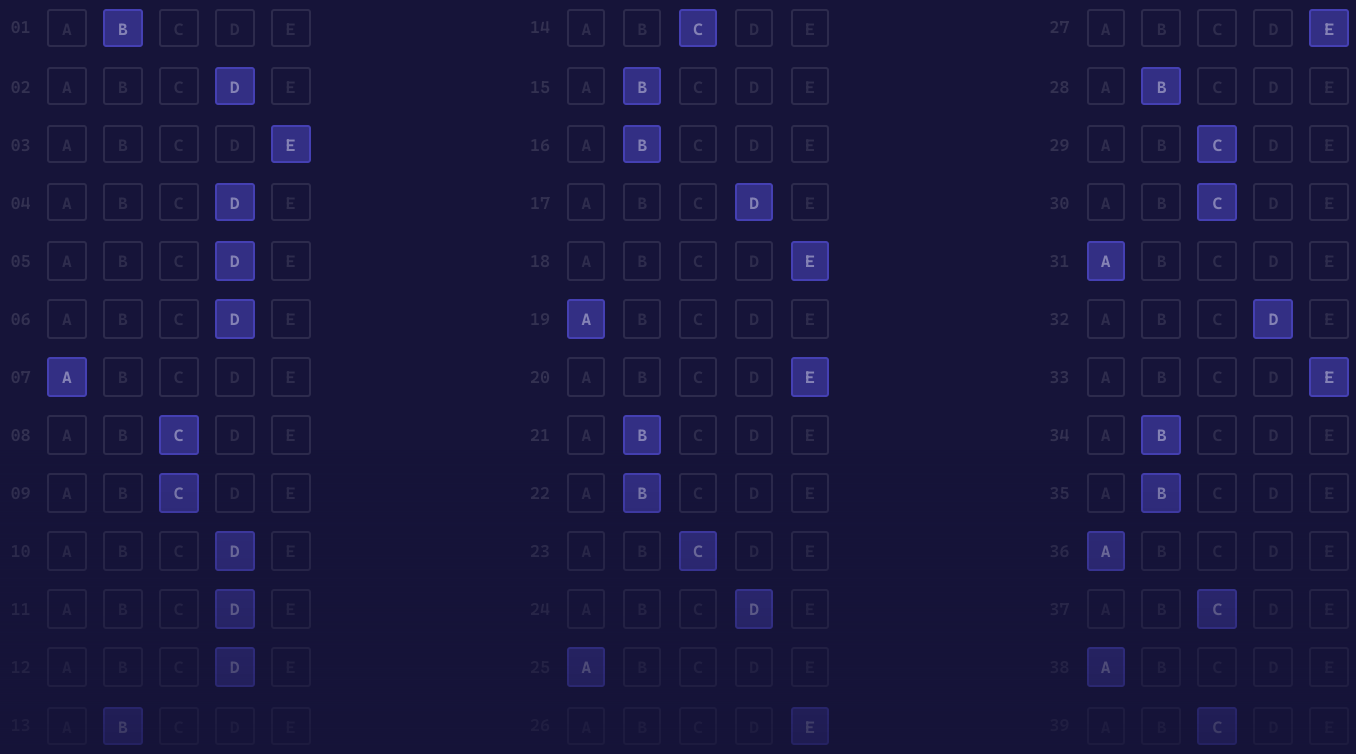

PRACTICE QUESTIONS

Society of Actuaries (SOA)

IV101

Portfolio Management Exam

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for Society of Actuaries (SOA) `IV101`, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, `IV101`
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

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QUESTION 1 SINGLE CHOICE

In the Society of Actuaries' portfolio management framework, what is the primary role of the investor (or asset owner)?

A To execute securities trades on behalf of the portfolio manager

B To set investment objectives and constraints, including risk tolerance and liquidity needs

C To perform quantitative analysis of security returns

D To custody the portfolio's assets in a third-party account

ANSWER B

WHY Within the SOA's portfolio management framework, the investor (asset owner) is responsible for establishing the investment objectives and constraints. The investor defines the risk tolerance, return objectives, time horizon, and liquidity requirements, and then delegates implementation to a portfolio manager. Executing trades, analyzing securities, and custodying assets are not the primary role of the investor in this framework.

QUESTION 2 SINGLE CHOICE

Which of the following is a key advantage of managing a portfolio using an internal investment organization rather than an external manager?

A Greater access to specialized niche asset classes

B Lower fixed costs due to economies of scale at third-party firms

C Direct alignment of the investment function with the organization's overall objectives and culture

D Reduced regulatory and compliance obligations

ANSWER C

WHY A primary advantage of an internal investment organization is that investment professionals work directly for the asset owner, which allows the investment function to be tightly aligned with the organization's overall mission, culture, and specific objectives. External managers may have broader access to niche strategies or benefit from scale, but internal management is typically chosen precisely because of this strategic alignment and direct control. Internal management actually tends to carry higher fixed costs and still requires full compliance oversight, so the other options are incorrect.

QUESTION 3 SINGLE CHOICE

Real assets, as an asset class, are best characterized as:

A Financial claims whose value derives from an underlying asset

B **Physical assets whose value is tied to their tangible properties, such as real estate, timberland, farmland, and infrastructure**

C Pooled private investments restricted to accredited investors

D Fixed-income securities whose cash flows are adjusted for inflation

ANSWER B

WHY Real assets are physical, tangible assets — including real estate, timberland, farmland, and infrastructure — whose value derives from their physical properties and the cash flows they generate. Financial derivatives are claims whose value derives from an underlying asset; alternative investments are a broader pooled/private category that may include real assets but is not defined by tangibility; and inflation-linked bonds are a fixed-income subcategory. Only option B correctly captures the defining characteristic of real assets.

QUESTION 4 SINGLE CHOICE

Consider a two-asset portfolio in which the two assets have equal weights of 50% each and individual standard deviations of 20% and 30%. If the correlation between the two assets is +1.0, the portfolio standard deviation is closest to:

A 15.0%

B 20.0%

C **25.0%**

D 50.0%

ANSWER C

WHY When the correlation between two assets is +1.0, there are no diversification benefits and the portfolio standard deviation equals the weighted average of the individual standard deviations: 0.5(20%) + 0.5(30%) = 25%. With correlations less than +1.0, diversification benefits would reduce the portfolio standard deviation below 25%. Option C is therefore correct.

QUESTION 5 SINGLE CHOICE

According to the capital asset pricing model (CAPM), the expected return on a security is the risk-free rate plus a beta-adjusted risk premium for which specific risk?

A Total risk measured by the standard deviation of returns

B Firm-specific (idiosyncratic) risk

C Market (systematic) risk

D Tracking error relative to a benchmark

ANSWER C

WHY The CAPM prices only systematic (market) risk, captured by beta, because it assumes investors hold diversified portfolios in which idiosyncratic risk has been eliminated. The expected return is calculated as $E(R) = Rf + \beta \times [E(Rm) - Rf]$, where the beta coefficient measures the security's sensitivity to market (systematic) risk. Total risk, firm-specific risk, and tracking error are not the risk measure priced by the CAPM.

QUESTION 6 SINGLE CHOICE

Under the strong form of the efficient market hypothesis (EMH), which prices are believed to reflect all available information?

A Only public information

B Public information and all historical price and volume data

C Public, private, and insider (monopolistic) information

D Only information disclosed in financial statements

ANSWER C

WHY The strong form of the EMH asserts that stock prices reflect all information, whether public or private, including insider information. The weak form states that prices reflect only historical price and volume information, and the semi-strong form states that prices reflect all publicly available information. Option C correctly captures the strong form.

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QUESTION 7 SINGLE CHOICE

In the context of market efficiency, what is an arbitrage opportunity?

A **A situation in which two assets with identical cash flows trade at different prices, allowing a riskless profit from buying the cheaper and selling the more expensive**

B A long-term trend in which an asset's price persistently exceeds its fundamental value

C Any investment strategy that produces positive returns over a one-year horizon

D A government-sanctioned program to support asset prices during a market downturn

ANSWER A

WHY An arbitrage opportunity is a condition in which two assets with identical cash flows trade at different prices, enabling an investor to buy the lower-priced asset, sell (or short) the higher-priced asset, and lock in a riskless profit with no net investment. The exploitation of such opportunities by arbitrageurs is what drives prices back toward consistency and helps maintain market efficiency. The other options describe persistent mispricings, general positive performance, or policy interventions, none of which define arbitrage.

QUESTION 8 SINGLE CHOICE

The Sharpe ratio measures the excess return of a portfolio per unit of which type of risk?

A Systematic (market) risk, measured by beta

B **Total risk, measured by standard deviation**

C Downside risk, measured by semi-deviation

D Tracking error relative to a benchmark

ANSWER B

WHY The Sharpe ratio is calculated as (portfolio return − risk-free rate) ÷ portfolio standard deviation, so it measures excess return per unit of total risk, where total risk is captured by the standard deviation of portfolio returns. The Treynor ratio uses beta (systematic risk), Jensen's alpha measures abnormal return versus the CAPM, and the information ratio uses tracking error. Only option B correctly identifies the risk measure used in the Sharpe ratio.

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QUESTION 9 MULTIPLE CHOICE

An institutional investor is comparing an internally managed investment program with an externally managed arrangement. Which two considerations are most directly relevant to this decision? (Choose two.)

A **The investment capabilities and resources available internally**

B **The cost and performance of external managers**

C The portfolio's expected arithmetic return only, without regard to risk

D A security's historical price-to-earnings ratio alone

ANSWER **A** · **B**

WHY The choice between internal and external management typically depends on the organization's available investment resources and capabilities, as well as the costs, expertise, and performance of external managers. Expected return alone or a single valuation ratio does not determine the management structure.

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