Mock Exam 1 Session 1 - Questions

Question 1

An analyst gathers the following economic and banking data:

Short-term real riskless rate = 0.9%

Real growth rate = 1.8%

Expected inflation = 2.1%

Target inflation = 2.4%

Risk premium for banking = 4.4%

Which of the following amounts is closest to the expected return on banking?

A) 5.3%.
B) 7.4%.
C) 8.3%.
D) 9.2%.

Question 2

In discussing the investment policy statement of different institutional investors, an analyst notes that a common investment objective of a defined contribution (DC) pension plan is to achieve a target return above the liability discount rate. The analyst further notes that endowments typically aim to achieve a return that exceeds inflation. The analyst is most accurate with respect to:

A) DC pension plans only.
B) endowments only.
C) both DC pension plans and endowments.
D) neither DC pension plans nor endowments.

Question 3

An investment manager for an endowment fund has concerns about liquidity risk and the potential losses, should there be a future financial crisis. She is considering increasing the allocation of cash and fixed-income investments to attempt to eliminate liquidity risk. What is the closest percentage of the endowment fund holdings that would have to consist of cash and fixed-income investments to reasonably avoid liquidity risk?

A) 10%.

B) 25%.

C) 35%.

D) It is not possible to reasonably avoid liquidity risk.

Question 4

A risk analyst makes the following statements regarding tail risk in an endowment:

Statement 1:	Tail risk is the risk of severe left-tail or right-tail events, which can cause significant portfolio volatility.
Statement 2:	One common way of reducing an endowment's tail risk is to reduce the allocation to risky alternative investments in favor of lower-risk investments.

The analyst is correct with respect to:

A) Statement 1 only.

B) Statement 2 only.

C) neither statement.

D) both statements.

Question 5

An endowment fund manager is looking to use equity options to hedge the risk of a significant concentration in one of the endowment's assets. The asset has a market price of $80 per share. The manager is considering these options on the asset: (1) a put option with a strike price of $70, or (2) a collar using a $75 strike price put and a $80 strike price call. Which of the following statements about the use of options is most accurate?

A) The put option provides downside protection but does not offer upside potential.

B) The manager should use the put option if the key goal is to minimize costs.

C) The collar provides some downside protection but allows uncapped upside potential.

D) The manager should use the collar if the key goal is to minimize losses.

Question 6

At the very beginning of the year, a defined benefit plan has plan assets of $4.8 billion and a projected benefit obligation (PBO) of $4.4 billion. The plan liabilities have a modified duration of 18. Several months later, the value of plan assets falls by 5%, and the discount rate used for the PBO calculation rises by 1.5%. The funded status of the pension plan after the two changes is closest to:

A) underfunded by $1.03 billion.

B) overfunded by $1.03 billion.

C) underfunded by $1.35 billion.

D) overfunded by $1.35 billion.

Question 7

AlphaCorp and BetaCorp are U.S. pharmaceutical companies with large defined benefit (DB) pension plans. AlphaCorp's pension plan is underfunded, while BetaCorp's pension plan is overfunded. The assets of both funds are invested in fixed-income securities only, and the asset durations exceed the liability durations. What is the most likely outcome of an anticipated decline in interest rates?

A) The funded status of both funds will improve.

B) Only AlphaCorp’s funded status will improve.

C) Only BetaCorp’s funded status will improve.

D) Neither fund’s funded status will improve.

Question 8

Carole James is recently retired and estimates her remaining life expectancy at 25 years. Her pension plan offers her a choice between (1) a fixed $50,000 annuity and (2) a $40,000 initial annuity payment that will grow at 2% annually. The market interest rate is 4%. The valuation of annuities formulas are as follows:

$$\mathrm{PV}_{\mathrm{fixed}} = \frac{\mathrm{payment}}{\mathrm{r}} \times \left[1 - \frac{1}{(1+\mathrm{r})^{\mathrm{n}}}\right]$$

$$\mathrm{PV}_{\mathrm{growth}} = \frac{\mathrm{initial\ payment}}{\mathrm{r}-\mathrm{g}} \times \left[1 - \left(\frac{1+\mathrm{g}}{1+\mathrm{r}}\right)^{\mathrm{n}}\right]$$

Based on this information, James should select:

A) the fixed annuity, because its present value exceeds the growth annuity by approximately $38,000.

B) the fixed annuity, because its present value exceeds the growth annuity by approximately $12,000.

C) the growth annuity, because its present value exceeds the growth annuity by approximately $38,000.

D) the growth annuity, because its present value exceeds the growth annuity by approximately $12,000.

Question 9

A country's imports last year were $103 billion while its exports were $98 billion. The change in the reserve account last year was +$4 billion. Which of the following statements about the country's balance of payment components is most accurate?

A) The capital account deficit was $1 billion.

B) The current account surplus was $5 billion.

C) The capital account surplus was $9 billion.

D) The current account deficit was $1 billion.

Question 10

In a report to investors on sovereign wealth funds (SWFs), a government analyst notes that sovereign wealth stabilization funds are typically intended to be cyclical, because cyclical changes allow a country to put aside a portion of commodity revenues in prosperous times and use this revenue for future generations in adverse times. The analyst also notes that sovereign wealth reserve investment funds typically have a total return objective. Is the analyst correct with respect to these statements?

	Stabilization funds	Reserve investment funds
A)	Yes	No
B)	No	No
C)	No	Yes
D)	Yes	Yes

Question 11

A wealthy individual investor is considering moving his assets to a family office. During a discussion with a friend, his friend notes four attributes of family offices that are key advantages and disadvantages:

- Family offices often have a high allocation to aggressive alternative investments.
- The speed of investment decisions is typically faster than other institutional investors including pension funds and foundations.
- However, family offices need to maintain high levels of liquidity to satisfy lifestyle needs, and therefore cannot capture liquidity premiums from illiquid investments.
- Further, family offices can create conflicts of interest between the investor and the fund managers.

The investor's friend is correct with respect to:

A) none of the statements.

B) one statement.

C) two statements.

D) three statements.

Question 12

A family office is considering donating a significant portion of its portfolio to reduce homelessness in its city. The remaining portfolio will be invested in a range of companies that are perceived to have prudent corporate government practices and ethical trade practices. Which of the following terms best reflect these actions?

	Donating to reduce homelessness	Selecting prudent and ethical companies
A)	Charity	Negative screening
B)	Philanthropy	Negative screening
C)	Philanthropy	Positive screening

Question 13

James Mortimer is a U.S.-based high-net-worth investor. Mortimer has $75 million in cash and cash-equivalent investments reserved for opportunistic investments, and $450 million in concentrated real estate investments. The most appropriate risk categorization, respectively, of the two investments is:

A) aspirational risk and market risk.
B) personal risk and aspirational risk.
C) personal risk and market risk.
D) market risk and aspirational risk.

Question 14

An investor is looking to add an asset to his existing diversified portfolio. The asset has the same standard deviation of returns as the portfolio, and it has a correlation with the portfolio's return that is less than 1 but greater than 0. By adding this asset to the portfolio, portfolio risk will most likely:

A) decline because the correlation is less than 1.
B) stay the same because the standard deviation is the same.
C) increase because the correlation is positive.
D) either decline or increase depending on the weight of the asset.

Question 15

A portfolio analyst is attempting to perform mean-variance optimization with a risk-free asset and a risky asset. Assume the risk-free rate and expected rate of return on the risky asset are 2% and 8%, respectively. If the annualized variance of the risky asset is 0.0121 and the investor has a risk-aversion degree of 9, which of the following amounts is closest to the optimal investment allocation to the risk-free asset?

A) 8%.

B) 45%.

C) 55%.

D) 94%.

Question 16

An investor is considering adding an asset to a given asset portfolio which has an optimal return of 15% and a standard deviation of 12%. The new asset's beta in relation to the optimal portfolio is 0.6. With a prevailing risk free rate of 3%, the hurdle rate is closest to:

A) 7.2%.

B) 10.2%.

C) 12.0%.

D) 13.8%.

Question 17

A portfolio manager has determined that the real estate asset class should have a liquidity level of 0.08. The expected annual mean return for real estate is 15%. The investor has a medium preference for liquidity ($\phi = 0.40$). Based on the information provided, the adjusted mean return of real estate is closest to:

A) 2.8%.

B) 5.5%.

C) 10.2%.

D) 11.8%.

Question 18

When comparing a traditional asset allocation approach to a total portfolio approach (TPA), it would be correct to say that the TPA:

A) uses relative valuation metrics.

B) shifts to a risk factor diversification focus.

C) organizes into siloed teams to manage investments.

D) measures performance with asset class benchmarks.

Question 19

An institutional asset manager is switching from a traditional (i.e., strategic asset allocation) approach to a total portfolio approach (TPA). Which of the following actions is least likely a challenge that should be considered?

A) Some of the portfolio holdings may have lagging effects.

B) Tracking the reference portfolio limits risk factor exposures.

C) Conducting scenario analysis is necessary to test for model errors.

D) The models used need to be robust for risk factors that spread across multiple asset classes.

Question 20

Which of the following statements regarding the core-satellite approach to portfolio management is most accurate?

A) It is primarily a passive investment approach.

B) It usually involves equal investment focus on the core and the satellite.

C) It can be used to satisfy investors who have both risk-aversion and risk-seeking needs.

D) It usually adds value to investors but comes with the disadvantage of additional costs.

Question 21

A portfolio manager is focused on strategic asset allocation and in the process, analyzes the political and currency risks of investing in certain countries. Based solely on the information provided, the portfolio manager is using which approach to portfolio management?

A) Bottom-up approach only.

B) Top-down approach only.

C) Bottom-up or top-down approach.

D) Mixed approach only.

Question 22

A risk parity portfolio has an estimated annual standard deviation of 10%. A regular portfolio has an expected return of 9%, and an annual standard deviation of 14%. The relevant risk-free rate is 1%, and the minimum acceptable return is 2%. The return that the risk parity portfolio needs to generate for an investor to be indifferent between the risk parity and the regular portfolio is closest to:

A) 6.4%.

B) 6.7%.

C) 7.0%.

D) 9.0%.

Question 23

A fully robust tactical asset allocation model will incorporate all of the following features except:

A) the absence of data mining.

B) the avoidance of overfitting.

C) the use of economically sound signals.

D) the exclusion of technical based signals.

Question 24

A portfolio manager has a new investment portfolio of stocks. The portfolio is periodically rebalanced. Some of the stock prices are mean reverting, while others follow a random walk. Which of the following statements is correct regarding rebalancing when stock prices are mean reverting versus following a random walk?

A) Rebalancing does not change the expected value of a portfolio when stock prices are mean reverting and when stock prices follow a random walk.

B) Rebalancing does not change the expected value of a portfolio when stock prices are mean reverting, and rebalancing increases the expected value when stock prices follow a random walk.

C) Rebalancing increases the expected value of a portfolio when stock prices are mean reverting and when stock prices follow a random walk.

D) Rebalancing increases the expected value of a portfolio when stock prices are mean reverting, and rebalancing does not change the expected value when stock prices follow a random walk.

Question 25

All of the following items represent potential costs of replacing an underperforming private equity fund manager except:

A) due diligence costs.

B) administrative costs.

C) lost earnings on cash balances.

D) restrictions on future investments.

Question 26

An analyst has determined using the Black-Scholes option pricing model and other factors that N(d1) = 0.62. Using that information, the delta of a short straddle is closest to:

A) –0.24.

B) +0.24.

C) –1.00.

D) +1.00.